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Section II – County Soil and Site Information Reports

**County specific computer generated reports.*

ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Deuel County, Nebraska: Update

Map symbol	Soil name	Acres	Percent
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1146	Alliance-Rosebud Loams, 1 To 3 Percent Slopes	16,496	5.8
1198	Altvan-Eckley-Satanta Complex, 3 To 9 Percent Slopes	19,587	6.9
1295	Ashollow-Tassel Complex, 9 To 30 Percent Slopes	3,202	1.1
1588	Blueridge-Altvan Complex, 6 To 30 Percent Slopes	28,401	10.1
1782	Broadwater Loamy Sand, 0 To 1 Percent Slopes, Frequently Flooded	4,359	1.5
1944	Calamus Sand, 0 To 1 Percent Slopes, Very Rarely Flooded	675	0.2
2072	Chappell-Alice-Broadwater Complex, 0 To 3 Percent Slopes	14,343	5.1
2630	Duroc Loam, 0 To 1 Percent Slopes	10,723	3.8
2638	Duroc Loam, Terrace, 0 To 1 Percent Slopes	5,231	1.9
2639	Duroc Loam, Terrace, 1 To 3 Percent Slopes	798	0.3
3050	Glenberg Fine Sandy Loam, 0 To 1 Percent Slopes, Rarely Flooded	2,621	0.9
3140	Gothenburg Soils, 0 To 1 Percent Slopes, Occasionally Flooded	1,706	0.6
3952	Jankosh Loam, 0 To 1 Percent Slopes, Rarely Flooded	1,097	0.4
4028	Jayem Fine Sandy Loam, 0 To 2 Percent Slopes	1,348	0.5
4070	Johnstown-Satanta-Richfield Loams, 0 To 1 Percent Slopes	23,283	8.3
4151	Keith Loam, 1 To 3 Percent Slopes	10,179	3.6
4152	Keith Loam, 3 To 6 Percent Slopes	133	*
4310	Kuma Loam, 0 To 1 Percent Slopes	2,504	0.9
4311	Kuma Loam, 1 To 3 Percent Slopes	326	0.1
4472	Las Animas Loam, 0 To 1 Percent Slopes, Channeled, Frequently Flooded	1,358	0.5
4475	Las Animas Loam, 0 To 1 Percent Slopes, Occasionally Flooded	467	0.2
4592	Lexsworth Loam, 0 To 1 Percent Slopes, Very Rarely Flooded	1,695	0.6
4655	Lodgepole Silt Loam, Ponded	1,416	0.5
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6132	Platte Loam, 0 To 1 Percent Slopes, Occasionally Flooded	936	0.3
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6625	Sarben Loamy Fine Sand, 0 To 3 Percent Slopes	675	0.2
6626	Sarben Loamy Fine Sand, 3 To 6 Percent Slopes	4,483	1.6
6722	Satanta-Altvan Complex, 3 To 6 Percent Slopes	15,271	5.4
6725	Satanta-Ascalon Complex, 0 To 2 Percent Slopes	1,735	0.6
6727	Satanta-Johnstown-Altvan Loams, 1 To 3 Percent Slopes	61,994	22.0
6817	Scoville Loamy Fine Sand, 0 To 3 Percent Slopes	705	0.2
6930	Sidney Loam, 3 To 6 Percent Slopes	8,733	3.1
6937	Sidney-Canyon Loams, 3 To 9 Percent Slopes	7,147	2.5
7120	Sulco-Mcconaughy Loams, 3 To 6 Percent Slopes, Moderately Eroded	8,055	2.9
7121	Sulco-Mcconaughy Loams, 6 To 9 Percent Slopes, Moderately Eroded	1,934	0.7
7122	Sulco-Mcconaughy Loams, 9 To 20 Percent Slopes, Moderately Eroded	433	0.2
7582	Valent Fine Sand, 3 To 9 Percent Slopes	2,020	0.7
7586	Valent Fine Sand, Rolling	1,882	0.7
7588	Valent Complex, Rolling And Hilly	339	0.1
9975	Sanitary Landfill	37	*
9985	Pits, Sand And Gravel	386	0.1
9998	Water	444	0.2
	Total	282,093	100.0

* Less than 0.1 percent.

NONTECHNICAL SOIL DESCRIPTIONS
Deuel County, Nebraska

Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units, shown in the NonTechnical Descriptions report. These descriptions are written in terminology that Non-technical users of soil survey information can understand.
Nontechnical soil descriptions are a powerful tool for creating reports. These high quality, easy to read reports can be generated by conservation planners and other NRCS employees for distribution to land users. Soil map unit descriptions and National Soil Information System records are the basis for these descriptions.

1130 Alliance Loam, 0 To 1 Percent Slopes

Alliance soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is negligible. The parent material consists of loess over sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

1146 Alliance-Rosebud Loams, 1 To 3 Percent Slopes

Alliance soil makes up 65 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess over sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

Rosebud soil makes up 25 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess over weakly cemented fine grained sandstone. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately slow. It has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

1198 Altvan-Eckley-Satanta Complex, 3 To 9 Percent Slopes

Altvan soil makes up 45 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping shoulder, backslope hillslope on upland. The runoff class is medium. The parent material consists of loess over alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a low available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Eckley soil makes up 30 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope, shoulder hillslope on upland. The runoff class is low. The parent material consists of pedisediment. This soil is well drained. The slowest permeability is moderately slow. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Shallow To Gravel - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Satanta, sandy substratum, soil makes up 20 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping shoulder, backslope hillslope on upland. The runoff class is medium. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

1295 Ashollow-Tassel Complex, 9 To 30 Percent Slopes

Ashollow soil makes up 65 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep footslope hillslope on upland. The runoff class is high. The parent material consists of loamy residuum weathered from calcareous sandstone. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Tassel soil makes up 30 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep backslope, shoulder hillslope on upland. The runoff class is medium. The parent material consists of residuum weathered from calcareous sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is somewhat excessively drained. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

1588 Blueridge-Altvan Complex, 6 To 30 Percent Slopes

Blueridge soil makes up 50 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to steep shoulder, backslope hillslope on upland. The runoff class is low. The parent material consists of sandy and gravelly material deposited over gravelly sand. This soil is excessively drained. The slowest permeability is very rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Shallow To Gravel - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

Altvan soil makes up 35 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping shoulder, footslope hillslope on upland. The runoff class is high. The parent material consists of loess over alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

1782 Broadwater Loamy Sand, 0 To 1 Percent Slopes, Frequently Flooded

Broadwater, frequently flooded, soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on valley. The runoff class is negligible. The parent material consists of stratified sandy and gravelly alluvium. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Shallow To Gravel - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6w.

1944 Calamus Sand, 0 To 1 Percent Slopes, Very Rarely Flooded

Calamus, very rarely flooded, soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is very rare flooded and is not ponded. The top of the seasonal high water table is at 54 inches. This soil is in the Sandy 17-22" P.z. range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 6s.

2072 Chappell-Alice-Broadwater Complex, 0 To 3 Percent Slopes

Chappell soil makes up 38 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping stream terrace on river valley. The runoff class is very low. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Alice soil makes up 33 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping stream terrace on river valley. The runoff class is very low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Broadwater soil makes up 24 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of stratified sandy and gravelly alluvium. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Shallow To Gravel - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6w.

2630 Duroc Loam, 0 To 1 Percent Slopes

Duroc soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level swale on tableland. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

2638 Duroc Loam, Terrace, 0 To 1 Percent Slopes

Duroc soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level stream terrace on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

2639 Duroc Loam, Terrace, 1 To 3 Percent Slopes

Duroc soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping stream terrace on river valley. The runoff class is low. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

3050 Glenberg Fine Sandy Loam, 0 To 1 Percent Slopes, Rarely Flooded

Glenberg, rarely flooded, soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of stratified calcareous alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy Lowland - Veg. Zone 1 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

3140 Gothenburg Soils, 0 To 1 Percent Slopes, Occasionally Flooded

Gothenburg, occasionally flooded, soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is very low. The parent material consists of sandy and gravelly alluvium. This soil is poorly drained. The slowest permeability is rapid. It has a very low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 5 percent calcium carbonate. It is in the nonirrigated land capability classification 7s.

3952 Jankosh Loam, 0 To 1 Percent Slopes, Rarely Flooded

Jankosh soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is low. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is somewhat poorly drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a moderately saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 6s.

4028 Jayem Fine Sandy Loam, 0 To 2 Percent Slopes

Jayem soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping plain on tableland. The runoff class is very low. The parent material consists of sandy and silty eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 2 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

4070 Johnstown-Satanta-Richfield Loams, 0 To 1 Percent Slopes

Johnstown soil makes up 35 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is negligible. The parent material consists of loess over gravelly sand. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Satanta, sandy substratum, soil makes up 31 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is negligible. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

Richfield soil makes up 29 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is negligible. The parent material consists of loess. This soil is well drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

4151 Keith Loam, 1 To 3 Percent Slopes

Keith soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

4152 Keith Loam, 3 To 6 Percent Slopes

Keith soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping plain on tableland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

4310 Kuma Loam, 0 To 1 Percent Slopes

Kuma soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is negligible. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

4311 Kuma Loam, 1 To 3 Percent Slopes

Kuma soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

4472 Las Animas Loam, 0 To 1 Percent Slopes, Channeled, Frequently Flooded

Las Animas, frequently flooded, soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of calcareous stratified alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a very slightly saline horizon, This soil is in the Silty Overflow - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 5w.

4475 Las Animas Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Las Animas, occasionally flooded, soil makes up 92 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of calcareous stratified alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a very slightly saline horizon, This soil is in the Subirrigated - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2w. It is in the nonirrigated land capability classification 2w.

NONTECHNICAL SOIL DESCRIPTIONS--Continued
Deuel County, Nebraska

4592 Lexsworth Loam, 0 To 1 Percent Slopes, Very Rarely Flooded

Lexsworth, very rarely flooded, soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is moderately well drained. The slowest permeability is moderately slow. It has a low available water capacity and a low shrink swell potential. This soil is very rare flooded and is not ponded. The top of the seasonal high water table is at 78 inches. The soil contains a maximum amount of 9 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Silty Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3w. It is in the nonirrigated land capability classification 3w.

4655 Lodgepole Silt Loam, Ponded

Lodgepole, ponded, soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level playa on tableland. The runoff class is very low. The parent material consists of loess. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is occasional ponded. The top of the seasonal high water table is at 0 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Clayey Overflow - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4w. It is in the nonirrigated land capability classification 3w.

5212 Merrick Sandy Clay Loam, 0 To 1 Percent Slopes, Very Rarely Flooded

Merrick, very rarely flooded, soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of stratified alluvium. This soil is moderately well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is very rare flooded and is not ponded. The top of the seasonal high water table is at 60 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

6132 Platte Loam, 0 To 1 Percent Slopes, Occasionally Flooded

Platte, occasionally flooded, soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level flood plain on river valley. The runoff class is negligible. The parent material consists of loamy alluvium over sandy and gravelly alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 24 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4w. It is in the nonirrigated land capability classification 6w.

6248 Ralton Loam, 0 To 1 Percent Slopes, Very Rarely Flooded

Ralton, very rarely flooded, soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level stream terrace on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is very rare flooded and is not ponded. The top of the seasonal high water table is at 54 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1 It is in the nonirrigated land capability classification 2c.

6625 Sarben Loamy Fine Sand, 0 To 3 Percent Slopes

Sarben soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping plain on tableland. The runoff class is negligible. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

6626 Sarben Loamy Fine Sand, 3 To 6 Percent Slopes

Sarben soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is very low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

6722 Satanta-Altvan Complex, 3 To 6 Percent Slopes

Satanta soil makes up 65 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping backslope hillslope on upland. The runoff class is low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

Altvan soil makes up 25 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping shoulder, backslope hillslope on upland. The runoff class is low. The parent material consists of loess over alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

6725 Satanta-Ascalon Complex, 0 To 2 Percent Slopes

Satanta, sandy substratum, soil makes up 45 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping plain on tableland. The runoff class is low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

Ascalon soil makes up 45 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping plain on tableland. The runoff class is low. The parent material consists of moderately coarse textured calcareous loess. This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

6727 Satanta-Johnstown-Altvan Loams, 1 To 3 Percent Slopes

Satanta, sandy substratum, soil makes up 60 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

Johnstown soil makes up 18 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess over gravelly sand. This soil is well drained. The slowest permeability is moderately slow. It has a high available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

Altvan soil makes up 15 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess over alluvium. This soil is well drained. The slowest permeability is moderately slow. It has a moderate available water capacity and a moderate shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2s. It is in the nonirrigated land capability classification 3e.

6817 Scoville Loamy Fine Sand, 0 To 3 Percent Slopes

Scoville soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping stream terrace on river valley. The runoff class is negligible. The parent material consists of sandy eolian deposits over loamy alluvium. This soil is somewhat excessively drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

6930 Sidney Loam, 3 To 6 Percent Slopes

Sidney soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping shoulder, footslope hillslope on upland. The runoff class is low. The parent material consists of calcareous loamy residuum weathered from weakly cemented fine grained sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

6937 Sidney-Canyon Loams, 3 To 9 Percent Slopes

Sidney soil makes up 65 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping shoulder, footslope hillslope on upland. The runoff class is medium. The parent material consists of calcareous loamy residuum weathered from weakly cemented fine grained sandstone. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Canyon soil makes up 25 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope, shoulder hillslope on upland. The runoff class is medium. The parent material consists of calcareous loamy residuum weathered from limestone and sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderate. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

7120 Sulco-Mcconaughy Loams, 3 To 6 Percent Slopes, Moderately Eroded

Sulco, moderately eroded, soil makes up 55 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping shoulder, backslope hillslope on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

Mcconaughy, moderately eroded, soil makes up 30 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping shoulder, footslope hillslope on upland. The runoff class is low. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

7121 Sulco-Mcconaughy Loams, 6 To 9 Percent Slopes, Moderately Eroded

Sulco, moderately eroded, soil makes up 65 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping backslope, shoulder hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Mcconaughy, moderately eroded, soil makes up 25 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping shoulder, footslope hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

7122 Sulco-Mcconaughy Loams, 9 To 20 Percent Slopes, Moderately Eroded

Sulco, moderately eroded, soil makes up 70 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep shoulder, backslope hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Mcconaughy, moderately eroded, soil makes up 20 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to moderately steep footslope, shoulder hillslope on upland. The runoff class is medium. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

7582 Valent Fine Sand, 3 To 9 Percent Slopes

Valent soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on sandhills. The runoff class is very low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands 17-22" P.z. range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

7586 Valent Fine Sand, Rolling

Valent soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep dune on sandhills. The runoff class is low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands 17-22" P.z. range site. It is in the nonirrigated land capability classification 6e.

7588 Valent Complex, Rolling And Hilly

Valent, rolling, soil makes up 50 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep dune on sandhills. The runoff class is low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands 17-22" P.z. range site. It is in the nonirrigated land capability classification 6e.

Valent, hilly, soil makes up 45 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a steep to very steep dune on sandhills. The runoff class is low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy Sands 17-22" P.z. range site. It is in the nonirrigated land capability classification 7e.

1130—Alliance loam, 0 to 1 percent slopes

Map Unit Composition

Alliance: 90 percent
Minor components: 10 percent

Component Descriptions
Alliance
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess over sandstone
Slope: 0 to 1 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 8.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
Ap—0 to 6 inches; loam
Bt1—6 to 17 inches; clay loam
Bt2—17 to 24 inches; loam
BCk—24 to 34 inches; loam
C—34 to 47 inches; very fine sandy loam
2C—47 to 54 inches; loamy fine sand
Cr—54 to 80 inches; weathered bedrock

Minor Components
Rosebud
Composition: About 10 percent
Slope: 0 to 1 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

1146—Alliance-Rosebud loams, 1 to 3 percent slopes

Map Unit Composition

Alliance: 65 percent
Rosebud: 25 percent
Minor components: 10 percent

Component Descriptions
Alliance
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess over sandstone
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
Ap—0 to 6 inches; loam
Bt1—6 to 14 inches; clay loam
Bt2—14 to 19 inches; clay loam
Bk—19 to 25 inches; loam
C—25 to 45 inches; very fine sandy loam
Cr—45 to 60 inches; weathered bedrock

Rosebud
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess over weakly cemented fine grained sandstone
Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Low (About 5.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 6 inches; loam
Bt1—6 to 11 inches; clay loam
Bt2—11 to 17 inches; clay loam
BkC—17 to 23 inches; loam
C—23 to 30 inches; very fine sandy loam
Cr—30 to 80 inches; weathered bedrock

Minor Components
Canyon
Composition: About 10 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Shallow Limy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

1198—Altvan-Eckley-Satanta complex, 3 to 9 percent slopes

Map Unit Composition

Altvan: 45 percent
Eckley: 30 percent
Satanta: 20 percent
Minor components: 5 percent

Component Descriptions
Altvan
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, backslope
Parent material: Loess over alluvium
Slope: 3 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Low (About 5.8 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
Ap—0 to 7 inches; fine sandy loam
Bt1—7 to 12 inches; loam
Bt2—12 to 17 inches; clay loam
BCk—17 to 25 inches; very fine sandy loam
C—25 to 31 inches; loamy fine sand
2C—31 to 80 inches; gravelly coarse sand

Eckley
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Backslope, shoulder
Parent material: Pedisediment
Slope: 3 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Low (About 3.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Shallow To Gravel - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:
Ap—0 to 5 inches; sandy loam
Bt—5 to 8 inches; sandy clay loam
BC—8 to 11 inches; gravelly sandy loam
2C1—11 to 15 inches; gravelly coarse sand
2C2—15 to 80 inches; gravelly coarse sand

Satanta
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, backslope
Parent material: Loamy eolian deposits
Slope: 3 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 8.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
Ap—0 to 10 inches; loam
Bt1—10 to 21 inches; loam
Bt2—21 to 30 inches; clay loam
BCk—30 to 37 inches; very fine sandy loam
C—37 to 42 inches; very fine sandy loam
2C1—42 to 50 inches; loamy fine sand
2C2—50 to 80 inches; fine sand

Minor Components
Broadwater
Composition: About 3 percent
Slope: 1 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Shallow To Gravel - Veg. Zone 2

Sarben
Composition: About 2 percent
Landform: hillslope on upland
Slope: 3 to 9 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

1295—Ashollow-Tassel complex, 9 to 30 percent slopes

Map Unit Composition

Ashollow: 65 percent
Tassel: 30 percent
Minor components: 5 percent

Component Descriptions
Ashollow
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Footslope
Parent material: Loamy residuum weathered from calcareous sandstone
Slope: 9 to 17 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.1 inches)
Shrink-swell potential: Low (About 0.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Sandy - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:
A—0 to 3 inches; very fine sandy loam
AC—3 to 10 inches; very fine sandy loam
C1—10 to 32 inches; very fine sandy loam
C2—32 to 60 inches; very fine sandy loam

Tassel
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Backslope, shoulder
Parent material: Residuum weathered from calcareous sandstone
Slope: 9 to 30 percent
Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)
Drainage class: Somewhat excessively drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Very low (About 1.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Shallow Limy - Veg. Zone 2
Land capability (nonirrigated): 6s

Typical Profile:
A—0 to 4 inches; fine sandy loam
C1—4 to 7 inches; fine sandy loam
C2—7 to 18 inches; gravelly fine sandy loam
Cr—18 to 60 inches; weathered bedrock

Minor Components
Rock outcrop
Composition: About 5 percent
Landform: hillslope on upland
Slope: 30 to 60 percent
Depth to restrictive feature: 0 inches to bedrock (paralithic)
Drainage class: Excessively drained
Ecological site: No Site - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for rangeland.

1588—Blueridge-Altvan complex, 6 to 30 percent slopes

Map Unit Composition

Blueridge: 50 percent

Altvan: 35 percent
Minor components: 15 percent

Component Descriptions
Blueridge
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, backslope
Parent material: Sandy and gravelly material deposited over gravelly sand
Slope: 6 to 30 percent
Drainage class: Excessively drained
Slowest permeability: Very rapid (About 20.00 in/hr)
Available water capacity: Very low (About 1.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Shallow To Gravel - Veg. Zone 2
Land capability (nonirrigated): 6s

Typical Profile:
A—0 to 4 inches; coarse sand
C1—4 to 40 inches; gravelly coarse sand
C2—40 to 80 inches; gravelly coarse sand

Altvan
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, footslope
Parent material: Loess over alluvium
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 6.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Silty - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:
Ap—0 to 7 inches; loam
Bt1—7 to 10 inches; sandy clay loam
Bt2—10 to 20 inches; sandy clay loam
BCk—20 to 24 inches; very fine sandy loam
C—24 to 30 inches; loamy fine sand
2C—30 to 80 inches; gravelly sand

Minor Components
Sarben
Composition: About 10 percent
Landform: hillslope on upland
Slope: 6 to 9 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Broadwater
Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Shallow To Gravel - Veg. Zone 2

General Considerations: The Blueridge soil is formed in very old alluvium that is now part of the disected upland. The Altvan soil is formed in the loess and underlying old alluvium. Most acreage of this map unit is used for rangeland.

1782—Broadwater loamy sand, 0 to 1 percent slopes, Frequently Flooded

Map Unit Composition

Broadwater: 90 percent
Minor components: 10 percent

Component Descriptions
Broadwater
MLRA: 72 - Central High Tableland
Landform: Flood plain on valley
Parent material: Stratified sandy and gravelly alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Very low (About 2.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Shallow To Gravel - Veg. Zone 2
Land capability (nonirrigated): 6w

Typical Profile:
A—0 to 3 inches; loamy sand
C—3 to 9 inches; loamy sand
2C1—9 to 32 inches; gravelly coarse sand
2C2—32 to 60 inches; gravelly coarse sand

Minor Components
Chappell

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Glenberg
Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy Lowland - Veg. Zone 1

General Considerations: Most acreage of this map unit is used for rangeland.

1944—Calamus sand, 0 to 1 percent slopes, very Rarely Flooded

Map Unit Composition

Calamus: 95 percent
Minor components: 5 percent

Component Descriptions
Calamus
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.3 inches)
Shrink-swell potential: Low (About 0.5 LEP)
Flooding hazard: Very Rare
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Negligible
Ecological site: Sandy 17-22" P.z.
Land capability (irrigated): 4s
Land capability (nonirrigated): 6s

Typical Profile:
Ap—0 to 7 inches; loamy sand
AC—7 to 14 inches; sand
C1—14 to 22 inches; sand
C2—22 to 38 inches; sand
C3—38 to 58 inches; stratified gravelly coarse sand to coarse sand
C4—58 to 60 inches; stratified gravelly coarse sand to coarse sand

Minor Components
Platte
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated - Veg. Zone 2

General Considerations: This map unit consists of old alluvial sand bars that have been reworked by wind. The river within this map unit has become more entrenched. Dams have been built upstream thereby decreasing the chances of flooding. Most acreage of this map unit is used for rangeland.

2072—Chappell-Alice-Broadwater complex, 0 to 3 percent slopes

Map Unit Composition

Chappell: 38 percent
Alice: 33 percent
Broadwater: 24 percent
Minor components: 5 percent

Component Descriptions
Chappell
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 5.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 7 inches; fine sandy loam
A—7 to 17 inches; fine sandy loam
Bw—17 to 25 inches; fine sandy loam
C—25 to 30 inches; fine sandy loam
2C—30 to 60 inches; gravelly coarse sand

Alice
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Alluvium
Slope: 0 to 3 percent
Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.4 inches)
Shrink-swell potential: Low (About 0.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 8 inches; sandy loam
A—8 to 14 inches; sandy loam
Bw—14 to 19 inches; sandy loam
C1—19 to 33 inches; sandy loam
C2—33 to 80 inches; sandy loam

Broadwater
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Stratified sandy and gravelly alluvium
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Very low (About 2.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Shallow To Gravel - Veg. Zone 2
Land capability (nonirrigated): 6w

Typical Profile:
A—0 to 3 inches; loamy sand
C—3 to 9 inches; loamy sand
2C1—9 to 32 inches; gravelly coarse sand
2C2—32 to 60 inches; gravelly coarse sand

Minor Components
Duroc
Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

2630—Duroc loam, 0 to 1 percent slopes

Map Unit Composition

Duroc: 90 percent
Minor components: 10 percent

Component Descriptions
Duroc
MLRA: 72 - Central High Tableland
Landform: Swale on tableland
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
Ap—0 to 6 inches; loam
A—6 to 14 inches; loam
Bw1—14 to 27 inches; loam
Bw2—27 to 32 inches; loam
Bk—32 to 42 inches; loam
C—42 to 60 inches; loam

Minor Components
Kuma
Composition: About 8 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Lodgepole
Composition: About 2 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

2638—Duroc loam, Terrace, 0 to 1 percent slopes

Map Unit Composition

Duroc: 90 percent
Minor components: 10 percent

Component Descriptions
Duroc
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
Ap—0 to 12 inches; loam
A—12 to 24 inches; loam
Bw—24 to 31 inches; loam
BC—31 to 37 inches; loam
C1—37 to 46 inches; loam
C2—46 to 60 inches; loam

Minor Components
Alice
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Chappell
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for irrigated production of corn and alfalfa.

2639—Duroc loam, Terrace, 1 to 3 percent slopes

Map Unit Composition

Duroc: 90 percent
Minor components: 10 percent

Component Descriptions
Duroc
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Alluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
Ap—0 to 12 inches; loam
A—12 to 24 inches; loam
Bw—24 to 31 inches; loam
BC—31 to 37 inches; loam
C1—37 to 46 inches; loam
C2—46 to 60 inches; loam

Minor Components
Alice
Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Chappell
Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for irrigated production of corn and alfalfa.

3050—Glenberg fine sandy loam, 0 to 1 percent slopes, Rarely Flooded

Map Unit Composition

Glenberg: 90 percent
Minor components: 10 percent

Component Descriptions
Glenberg
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Stratified calcareous alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy Lowland - Veg. Zone 1
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:
A—0 to 8 inches; fine sandy loam
C—8 to 60 inches; stratified loamy fine sand to fine sandy loam to very fine sandy loam

Minor Components
Chappell
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Broadwater
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat excessively drained
Ecological site: Shallow To Gravel - Veg. Zone 2

General Considerations: This map unit occurs on narrow intermittent drainageways associated with the uplands. This map unit joins Cheyenne County, Kansas. Most acreage of this map unit is used for rangeland.

3140—Gothenburg Soils, 0 to 1 percent slopes, Occasionally Flooded

Map Unit Composition

Gothenburg: 85 percent
Minor components: 15 percent

Component Descriptions
Gothenburg
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Sandy and gravelly alluvium
Slope: 0 to 1 percent
Drainage class: Poorly drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Very low (About 2.5 inches)
Shrink-swell potential: Low (About 0.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 0 to 18 inches
Runoff class: Very low
Land capability (nonirrigated): 7s

Typical Profile:
A—0 to 5 inches; loamy sand
C—5 to 14 inches; sand, sand
Cg—14 to 60 inches; coarse sand

Minor Components
Platte
Composition: About 15 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for rangeland.

3952—Jankosh loam, 0 to 1 percent slopes, Rarely Flooded

Map Unit Composition

Jankosh: 85 percent
Minor components: 15 percent

Component Descriptions
Jankosh
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained

Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 6.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Low
Ecological site: Saline Subirrigated - Veg. Zone 2
Land capability (irrigated): 4s
Land capability (nonirrigated): 6s

Typical Profile:
A—0 to 2 inches; loam
E—2 to 4 inches; loam
Btn—4 to 14 inches; sandy clay loam
Bkn1—14 to 18 inches; loam
Bkn2—18 to 33 inches; very fine sandy loam
2C—33 to 60 inches; gravelly coarse sand

Minor Components
Platte
Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated - Veg. Zone 2

Lexsworth
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit occurs on a high floodplain. The river channel has become entrenched and dams have been built upstream, thereby decreasing the chances of flooding. Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

4028—Jayem fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Jayem: 90 percent
Minor components: 10 percent

Component Descriptions
Jayem
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Sandy and silty eolian deposits
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 8.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 6 inches; fine sandy loam
A—6 to 9 inches; fine sandy loam
Bw—9 to 22 inches; fine sandy loam
C1—22 to 50 inches; fine sandy loam
C2—50 to 60 inches; fine sandy loam

Minor Components
Sarben
Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Satanta
Phase: Sandy Substratum
Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

4070—Johnstown-Satanta-Richfield loams, 0 to 1 percent slopes

Map Unit Composition

Johnstown: 35 percent
Satanta: 31 percent
Richfield: 29 percent
Minor components: 5 percent

Component Descriptions
Johnstown
MLRA: 72 - Central High Tableland

Landform: Plain on tableland
Parent material: Loess over gravelly sand
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.0 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
Ap—0 to 9 inches; loam
Bt1—9 to 25 inches; silty clay loam
Bt2—25 to 29 inches; silty clay loam
BCk—29 to 35 inches; loam
C—35 to 46 inches; very fine sandy loam
2C—46 to 60 inches; coarse sand

Satanta
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loamy eolian deposits
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.8 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
Ap—0 to 8 inches; loam
Bt—8 to 25 inches; clay loam
BCk—25 to 32 inches; loam
C—32 to 52 inches; very fine sandy loam
2C—52 to 60 inches; sand

Richfield
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Very slow (About 0.01 in/hr)
Available water capacity: High (About 10.1 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
Ap—0 to 7 inches; loam
Bt1—7 to 12 inches; silty clay
Bt2—12 to 17 inches; silty clay loam
BC—17 to 21 inches; silt loam
BCk—21 to 32 inches; silt loam
C—32 to 42 inches; silt loam
2C1—42 to 48 inches; fine sandy loam
2C2—48 to 78 inches; sandy loam
2C3—78 to 80 inches; gravelly coarse sand

Minor Components
Altvan
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

4151—Keith loam, 1 to 3 percent slopes

Map Unit Composition

Keith: 90 percent
Minor components: 10 percent

Component Descriptions
Keith
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)

Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
Ap—0 to 6 inches; loam
A—6 to 13 inches; loam
Bt1—13 to 22 inches; silty clay loam
Bt2—22 to 31 inches; silt loam
BCk—31 to 48 inches; silt loam
C—48 to 60 inches; very fine sandy loam

Minor Components
Alliance
Composition: About 5 percent
Slope: 1 to 3 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Duroc
Composition: About 3 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Silty Lowland- Veg. Zone 2

Lodgepole
Composition: About 2 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

4152—Keith loam, 3 to 6 percent slopes

Map Unit Composition

Keith: 90 percent
Minor components: 10 percent
Component Descriptions
Keith
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 7 inches; loam
Bt1—7 to 14 inches; silty clay loam
Bt2—14 to 19 inches; silt loam
BCk—19 to 25 inches; loam
C—25 to 60 inches; loam

Minor Components
Alliance
Composition: About 5 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Sidney
Composition: About 5 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

4310—Kuma loam, 0 to 1 percent slopes

Map Unit Composition

Kuma: 95 percent
Minor components: 5 percent

Component Descriptions
Kuma
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess

Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
A—0 to 7 inches; loam
BA—7 to 17 inches; loam
Bt—17 to 24 inches; loam
Btb—24 to 37 inches; loam
Btkb—37 to 44 inches; loam
Bk—44 to 60 inches; loam

Minor Components
Lodgepole
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

4311—Kuma loam, 1 to 3 percent slopes

Map Unit Composition

Kuma: 90 percent
Minor components: 10 percent

Component Descriptions
Kuma
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
Ap—0 to 6 inches; loam
Bt1—6 to 10 inches; silty clay loam
Bt2—10 to 23 inches; silty clay loam
Btb1—23 to 33 inches; silty clay loam
Btb2—33 to 41 inches; silt loam
C—41 to 60 inches; loam

Minor Components
Satanta
Phase: Sandy Substratum
Composition: About 8 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Lodgepole
Composition: About 2 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

4472—Las Animas loam, 0 to 1 percent slopes, Channeled, Frequently Flooded

Map Unit Composition

Las Animas: 95 percent
Minor components: 5 percent

Component Descriptions
Las Animas
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Calcareous stratified alluvium
Slope: 0 to 1 percent
Drainage class: Poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Frequent
Depth to seasonal water saturation: About 0 to 18 inches
Runoff class: Negligible
Ecological site: Silty Overflow - Veg. Zone 2
Land capability (nonirrigated): 5w

Typical Profile:
A—0 to 5 inches; loam
ACg—5 to 11 inches; fine sandy loam
Cg1—11 to 33 inches; stratified sandy loam to fine sandy loam
Cg2—33 to 60 inches; stratified loamy fine sand to very fine sandy loam

Minor Components
Ralton
Phase: Very Rarely Flooded
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit occurs on a first level floodplain. The river channel has become entrenched and dissected with meandering channels. Most acreage of this map unit is used for rangeland. Short steep slopes ranging up to 3 percent are included in this unit.

4475—Las Animas loam, 0 to 1 percent slopes, Occasionally Flooded

Map Unit Composition
Las Animas: 92 percent
Minor components: 8 percent

Component Descriptions
Las Animas
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Calcareous stratified alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Negligible
Ecological site: Subirrigated - Veg. Zone 2
Land capability (irrigated): 2w
Land capability (nonirrigated): 2w

Typical Profile:
A—0 to 5 inches; loam
ACg—5 to 11 inches; fine sandy loam
Cg1—11 to 33 inches; stratified sandy loam to fine sandy loam
Cg2—33 to 60 inches; stratified loamy fine sand to very fine sandy loam

Minor Components
Ralton
Phase: Very Rarely Flooded
Composition: About 6 percent
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Ecological site: Silty Lowland - Veg. Zone 2

Glenberg
Phase: Rarely Flooded
Composition: About 2 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy Lowland - Veg. Zone 1

General Considerations: This map unit occurs on a second level floodplain. This map unit joins Cheyenne County, Kansas. Most acreage of this map unit is used for irrigated production of corn and alfalfa.

4592—Lexsworth loam, 0 to 1 percent slopes, very Rarely Flooded

Map Unit Composition

Lexsworth: 85 percent
Minor components: 15 percent

Component Descriptions
Lexsworth
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)

Available water capacity: Low (About 5.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Very Rare
Depth to seasonal water saturation: About 60 to 96 inches
Runoff class: Negligible
Ecological site: Silty Lowland - Veg. Zone 2
Land capability (irrigated): 3w
Land capability (nonirrigated): 3w

Typical Profile:
Ap—0 to 12 inches; loam
C1—12 to 19 inches; sandy clay loam
C2—19 to 26 inches; coarse sandy loam
C3—26 to 33 inches; coarse sand
C4—33 to 52 inches; coarse sand
C5—52 to 60 inches; fine sand
C6—60 to 80 inches; coarse sand

Minor Components
Merrick
Phase: Very Rarely Flooded
Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Silty Lowland - Veg. Zone 2

Platte
Phase: Occasionally Flooded
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Subirrigated - Veg. Zone 2

General Considerations: This map unit occurs on a high floodplain. The river channel has become entrenched and dams have been built upstream, thereby decreasing the chances of flooding. Most acreage of this map unit is used for irrigated production of corn and alfalfa.

4655—Lodgepole silt loam, Ponded

Map Unit Composition

Lodgepole: 95 percent
Minor components: 5 percent

Component Descriptions
Lodgepole
MLRA: 72 - Central High Tableland
Landform: Playa on tableland
Parent material: Loess
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Very slow (About 0.01 in/hr)
Available water capacity: High (About 10.1 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Ponding hazard: Occasional
Depth to seasonal water saturation: About 0 to 0 inches
Runoff class: Very low
Ecological site: Clayey Overflow - Veg. Zone 2
Land capability (irrigated): 4w
Land capability (nonirrigated): 3w

Typical Profile:
Ap—0 to 5 inches; silt loam
Bt1—5 to 14 inches; silty clay
Bt2—14 to 26 inches; silty clay
BC—26 to 32 inches; silty clay loam
C1—32 to 48 inches; loam
C2—48 to 60 inches; loam

Minor Components
Duroc
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Silty Lowland- Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

5212—Merrick sandy clay loam, 0 to 1 percent slopes, very Rarely Flooded

Map Unit Composition

Merrick: 90 percent
Minor components: 10 percent

Component Descriptions
Merrick
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Stratified alluvium
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 11.1 inches)

Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: Very Rare
Depth to seasonal water saturation: About 48 to 72 inches
Runoff class: Negligible
Ecological site: Silty Lowland - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:
Ap—0 to 12 inches; sandy clay loam
A—12 to 27 inches; clay loam
AC—27 to 38 inches; clay loam
C1—38 to 42 inches; loam
C2—42 to 53 inches; loam
C3—53 to 64 inches; very fine sandy loam
C4—64 to 80 inches; very fine sandy loam

Minor Components
Duroc
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Silty Lowland- Veg. Zone 2

Lexsworth
Phase: Very Rarely Flooded
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit occurs on a high floodplain. The river channel has become entrenched and dams have been built upstream, thereby decreasing the chances of flooding. Most acreage of this map unit is used for irrigated production of corn and alfalfa.

6132—Platte loam, 0 to 1 percent slopes, Occasionally Flooded

Map Unit Composition

Platte: 90 percent
Minor components: 10 percent

Component Descriptions
Platte
MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Loamy alluvium over sandy and gravelly alluvium
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 4.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Depth to seasonal water saturation: About 12 to 36 inches
Runoff class: Negligible
Ecological site: Subirrigated - Veg. Zone 2
Land capability (irrigated): 4w
Land capability (nonirrigated): 6w

Typical Profile:
A—0 to 5 inches; loam
AC—5 to 11 inches; fine sandy loam
C—11 to 18 inches; fine sandy loam
2C—18 to 60 inches; gravelly coarse sand

Minor Components
Gothenburg
Phase: Occasionally Flooded
Composition: About 10 percent
Slope: 0 to 1 percent
Drainage class: Poorly drained

General Considerations: Most acreage of this map unit is used for rangeland.

6248—Ralton loam, 0 to 1 percent slopes, very Rarely Flooded

Map Unit Composition

Ralton: 90 percent
Minor components: 10 percent

Component Descriptions
Ralton
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Moderately well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Very Rare
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Negligible
Ecological site: Silty Lowland - Veg. Zone 2
Land capability (irrigated): 1

Land capability (nonirrigated): 2c

Typical Profile:
Ap1—0 to 6 inches; loam
Ap2—6 to 14 inches; loam
C1—14 to 24 inches; stratified very fine sandy loam to loam
C2—24 to 34 inches; very fine sandy loam
C3—34 to 51 inches; loam
C4—51 to 71 inches; very fine sandy loam
2C—71 to 80 inches; gravelly loamy coarse sand

Minor Components
Alice
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Chappell
Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for irrigated production of corn and alfalfa.

6625—Sarben loamy fine sand, 0 to 3 percent slopes

Map Unit Composition

Sarben: 90 percent
Minor components: 10 percent

Component Descriptions
Sarben
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Sandy and loamy eolian deposits
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 5.6 inches)
Shrink-swell potential: Low (About 0.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:
Ap—0 to 7 inches; loamy fine sand
AC—7 to 15 inches; fine sandy loam
C1—15 to 32 inches; fine sandy loam
C2—32 to 60 inches; fine sandy loam

Minor Components
Jayem
Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Valent
Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Excessively drained
Ecological site: Sands 17-22" P.z.

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

6626—Sarben loamy fine sand, 3 to 6 percent slopes

Map Unit Composition

Sarben: 90 percent
Minor components: 10 percent

Component Descriptions
Sarben
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Parent material: Sandy and loamy eolian deposits
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 5.6 inches)
Shrink-swell potential: Low (About 0.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
A—0 to 7 inches; loamy fine sand

AC—7 to 15 inches; fine sandy loam
C1—15 to 32 inches; fine sandy loam
C2—32 to 60 inches; fine sandy loam

Minor Components
Jayem
Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Valent
Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Excessively drained
Ecological site: Sands 17-22" P.z.

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

6722—Satanta-Altvan complex, 3 to 6 percent slopes

Map Unit Composition

Satanta: 65 percent
Altvan: 25 percent
Minor components: 10 percent

Component Descriptions
Satanta
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Backslope
Parent material: Loamy eolian deposits
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 9.6 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 6 inches; very fine sandy loam
Bt1—6 to 13 inches; clay loam
Bt2—13 to 19 inches; clay loam
BCk—19 to 26 inches; very fine sandy loam
C—26 to 52 inches; very fine sandy loam
2C—52 to 76 inches; loamy fine sand

Altvan
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, backslope
Parent material: Loess over alluvium
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 7.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
Ap—0 to 5 inches; fine sandy loam
Bt1—5 to 10 inches; clay loam
Bt2—10 to 14 inches; clay loam
BCk—14 to 24 inches; loam
C—24 to 38 inches; very fine sandy loam
2C—38 to 80 inches; coarse sand

Minor Components
Johnstown
Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Jayem
Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

6725—Satanta-Ascalon complex, 0 to 2 percent slopes

Map Unit Composition

Satanta: 45 percent
Ascalon: 45 percent
Minor components: 10 percent

Component Descriptions
Satanta
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loamy eolian deposits
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 9 inches; loam
A—9 to 14 inches; loam
Bt—14 to 26 inches; clay loam
BCk—26 to 31 inches; loam
C—31 to 55 inches; very fine sandy loam
2C—55 to 80 inches; sand

Ascalon
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Moderately coarse textured calcareous loess
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 6 inches; fine sandy loam
Bt—6 to 19 inches; sandy clay loam
BC—19 to 35 inches; fine sandy loam
C1—35 to 40 inches; fine sandy loam
C2—40 to 46 inches; loamy fine sand
C3—46 to 80 inches; stratified coarse sand to sand to loamy fine sand

Minor Components
Jayem
Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

6727—Satanta-Johnstown-Altvan loams, 1 to 3 percent slopes

Map Unit Composition

Satanta: 60 percent
Johnstown: 18 percent
Altvan: 15 percent
Minor components: 7 percent

Component Descriptions
Satanta
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loamy eolian deposits
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
Ap—0 to 9 inches; loam
A—9 to 14 inches; loam
Bt—14 to 26 inches; clay loam
BCk—26 to 31 inches; loam
C—31 to 55 inches; very fine sandy loam
2C—55 to 80 inches; sand

Johnstown

MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess over gravelly sand
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: High (About 10.5 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:
Ap—0 to 6 inches; loam
Bt—6 to 23 inches; clay loam
Btb—23 to 36 inches; clay loam
BCkb—36 to 42 inches; very fine sandy loam
Cb—42 to 58 inches; very fine sandy loam
2C—58 to 80 inches; sand

Altvan
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess over alluvium
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately slow (About 0.20 in/hr)
Available water capacity: Moderate (About 6.4 inches)
Shrink-swell potential: Moderate (About 4.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2s
Land capability (nonirrigated): 3e

Typical Profile:
Ap—0 to 5 inches; loam
Bt1—5 to 10 inches; clay loam
Bt2—10 to 17 inches; clay loam
BCk—17 to 24 inches; loam
C—24 to 30 inches; loam
2C—30 to 80 inches; coarse sand

Minor Components
Kuma
Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Lodgepole
Phase: Ponded
Composition: About 2 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

6817—Scoville loamy fine sand, 0 to 3 percent slopes

Map Unit Composition

Scoville: 95 percent
Minor components: 5 percent

Component Descriptions
Scoville
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Sandy eolian deposits over loamy alluvium
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 4.9 inches)
Shrink-swell potential: Low (About 0.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
Ap—0 to 6 inches; loamy fine sand
AC—6 to 10 inches; loamy fine sand
C—10 to 42 inches; fine sand
2C1—42 to 46 inches; very fine sandy loam
2C2—46 to 60 inches; loamy fine sand

Minor Components
Chappell
Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Well drained

Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for irrigated production of corn and alfalfa.

6930—Sidney loam, 3 to 6 percent slopes

Map Unit Composition

Sidney: 85 percent
Minor components: 15 percent

Component Descriptions
Sidney
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, footslope
Parent material: Calcareous loamy residuum weathered from weakly cemented fine grained sandstone
Slope: 3 to 6 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:
A—0 to 11 inches; loam
Bw—11 to 17 inches; loam
Bk—17 to 29 inches; very fine sandy loam
C—29 to 48 inches; very fine sandy loam
Cr—48 to 60 inches; weathered bedrock

Minor Components
Canyon
Composition: About 10 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Shallow Limy - Veg. Zone 2

Alliance
Composition: About 5 percent
Slope: 3 to 6 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

6937—Sidney-Canyon loams, 3 to 9 percent slopes

Map Unit Composition

Sidney: 65 percent
Canyon: 25 percent
Minor components: 10 percent

Component Descriptions
Sidney
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, footslope
Parent material: Calcareous loamy residuum weathered from weakly cemented fine grained sandstone
Slope: 6 to 9 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 8.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
A—0 to 11 inches; loam
Bw—11 to 17 inches; loam
Bk—17 to 29 inches; very fine sandy loam
C—29 to 48 inches; very fine sandy loam
Cr—48 to 60 inches; weathered bedrock

Canyon
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Backslope, shoulder

Parent material: Calcareous loamy residuum weathered from limestone and sandstone
Slope: 6 to 9 percent
Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Very low (About 1.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Shallow Limy - Veg. Zone 2
Land capability (nonirrigated): 6s

Typical Profile:
A—0 to 5 inches; loam
C—5 to 10 inches; very fine sandy loam
Cr—10 to 60 inches; weathered bedrock

Minor Components
Rosebud
Composition: About 10 percent
Slope: 6 to 9 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

7120—Sulco-Mcconaughy loams, 3 to 6 percent slopes, Moderately Eroded

Map Unit Composition

Sulco: 55 percent
Mcconaughy: 30 percent
Minor components: 15 percent

Component Descriptions
Sulco
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, backslope
Parent material: Loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:
Ap—0 to 5 inches; loam
AC—5 to 16 inches; loam
C1—16 to 26 inches; loam
C2—26 to 60 inches; loam

Mcconaughy
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, footslope
Parent material: Calcareous loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:
A—0 to 7 inches; loam
Bw—7 to 18 inches; loam
Bk—18 to 28 inches; loam
C—28 to 60 inches; loam

Minor Components
Keith
Composition: About 10 percent
Landform: hillslope on upland
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Duroc
Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Silty Lowland- Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

7121—Sulco-Mcconaughy loams, 6 to 9 percent slopes, Moderately Eroded

Map Unit Composition

Sulco: 65 percent
Mcconaughy: 25 percent
Minor components: 10 percent

Component Descriptions
Sulco
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Backslope, shoulder
Parent material: Loess
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
Ap—0 to 5 inches; loam
AC—5 to 16 inches; loam
C1—16 to 26 inches; loam
C2—26 to 60 inches; loam

Mcconaughy
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, footslope
Parent material: Calcareous loess
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:
A—0 to 7 inches; loam
Bw—7 to 18 inches; loam
Bk—18 to 28 inches; loam
C—28 to 60 inches; loam

Minor Components
Keith
Composition: About 5 percent
Landform: hillslope on tableland hillslope on upland
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Sarben
Composition: About 5 percent
Landform: hillslope on upland
Slope: 6 to 9 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for dryland production of winter wheat. Some areas are rotated with millet, sunflowers or corn.

7122—Sulco-Mcconaughy loams, 9 to 20 percent slopes, Moderately Eroded

Map Unit Composition

Sulco: 70 percent
Mcconaughy: 20 percent
Minor components: 10 percent

Component Descriptions
Sulco
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Shoulder, backslope
Parent material: Loess
Slope: 9 to 20 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:
Ap—0 to 5 inches; loam
AC—5 to 16 inches; loam
C1—16 to 26 inches; loam
C2—26 to 60 inches; loam

Mcconaughy
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Hillslope position: Footslope, shoulder
Parent material: Calcareous loess
Slope: 9 to 15 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Silty - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:
A—0 to 7 inches; loam
Bw—7 to 18 inches; loam
Bk—18 to 28 inches; loam
C—28 to 60 inches; loam

Minor Components
Keith
Composition: About 5 percent
Landform: hillslope on upland
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Sarben
Composition: About 5 percent
Landform: hillslope on upland
Slope: 9 to 15 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for rangeland.

7582—Valent fine sand, 3 to 9 percent slopes

Map Unit Composition

Valent: 90 percent
Minor components: 10 percent

Component Descriptions
Valent
MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 3 to 9 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.6 inches)
Shrink-swell potential: Low (About 0.0 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sands 17-22" P.z.
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:
A—0 to 4 inches; fine sand
C—4 to 60 inches; fine sand

Minor Components
Sarben
Composition: About 10 percent
Slope: 3 to 9 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for rangeland.

7586—Valent fine sand, Rolling

Map Unit Composition

Valent: 95 percent
Minor components: 5 percent

Component Descriptions
Valent
MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 9 to 24 percent

Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.6 inches)
Shrink-swell potential: Low (About 0.0 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sands 17-22" P.z.
Land capability (nonirrigated): 6e

Typical Profile:
A—0 to 4 inches; fine sand
C—4 to 60 inches; fine sand

Minor Components
Sarben
Composition: About 5 percent
Slope: 3 to 9 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for rangeland.

7588—Valent complex, Rolling And Hilly

Map Unit Composition

Valent: 50 percent
Valent: 45 percent
Minor components: 5 percent

Component Descriptions
Valent
MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 9 to 24 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.6 inches)
Shrink-swell potential: Low (About 0.0 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sands 17-22" P.z.
Land capability (nonirrigated): 6e

Typical Profile:
A—0 to 4 inches; fine sand
C—4 to 60 inches; fine sand

Valent
MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 24 to 60 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.6 inches)
Shrink-swell potential: Low (About 0.0 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Choppy Sands 17-22" P.z.
Land capability (nonirrigated): 7e

Typical Profile:
A—0 to 4 inches; fine sand
C—4 to 60 inches; fine sand

Minor Components
Sarben
Composition: About 5 percent
Slope: 3 to 9 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: Most acreage of this map unit is used for rangeland.

9975—Sanitary Landfill

Map Unit Composition

9985—Pits, sand And Gravel

Map Unit Composition

Pits: 100 percent

Component Descriptions
Pits
MLRA: 72 - Central High Tableland
Slope: 0 to 30 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.5 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None

Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Land capability (nonirrigated): 8s

9998—Water

Map Unit Composition

Water: 100 percent

Component Descriptions
Water
MLRA: 72 - Central High Tableland
Depth to seasonal water saturation: More than 6 feet

General Considerations: Water includes streams, lakes, ponds, and estuaries. These areas are covered with water in most years, at least during the period that is warm enough for plants to grow. Many areas are covered throughout the year.

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS
Deuel County, Nebraska

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive land-forming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes. In the capability system, soils are generally grouped at three levels: capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

(Class 1) soils have slight limitations that restrict their use.

(Class 2) soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

(Class 3) soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

(Class 4) soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

(Class 5) soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 6) soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 7) soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

(Class 8) soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief. limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in the Land Capability and Component Yields table.

Crop Yield Estimates

The average yields per acre that can be expected of the principal crops under a high level of management are shown in "Land Capibility and Component Yields" table. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, animal waste manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in this table, are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service (NRCS) or the Cooperative Extension Service (CES) can provide information about the management and productivity of the soils for those crops.

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Deuel County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Winter wheat-fallow	
	N	I	N	I	N	I
			Bu		Bu	
1130: ALLIANCE	2c	1	---	145.00	42.00	---
1146: ALLIANCE	2e	2e	---	140.00	40.00	---
ROSEBUD	3e	3e	---	130.00	36.00	---
1198: ALTVAN	4e	4e	---	125.00	30.00	---
ECKLEY	6e	---	---	95.00	17.00	---
SATANTA	4e	4e	---	135.00	32.00	---
1295: ASHOLLOW	6e	---	---	---	---	---
TASSEL	6s	---	---	---	---	---
1588: BLUERIDGE	6s	---	---	---	---	---
ALTVAN	6e	---	---	---	---	---
1782: BROADWATER	6w	---	---	---	---	---
1944: CALAMUS	6s	4s	---	100.00	26.00	---
2072: CHAPPELL	3e	2e	---	130.00	30.00	---
ALICE	3e	2e	---	135.00	35.00	---
BROADWATER	6w	---	---	75.00	18.00	---
2630: DUROC	2c	1	---	155.00	46.00	---
2638: DUROC	2c	1	---	155.00	46.00	---
2639: DUROC	2e	2e	---	150.00	45.00	---
3050: GLENBERG	3e	2e	---	130.00	30.00	---
3140: GOTHENBURG	7s	---	---	---	---	---
3952: JANKOSH	6s	4s	---	80.00	20.00	---
4028: JAYEM	3e	2e	---	130.00	42.00	---
4070: JOHNSTOWN	2c	1	---	145.00	43.00	---
SATANTA	2c	1	---	145.00	40.00	---
RICHFIELD	2c	1	---	135.00	38.00	---
4151: KEITH	2e	2e	---	140.00	42.00	---
4152: KEITH	3e	3e	---	135.00	32.00	---
4310: KUMA	2c	1	---	155.00	46.00	---
4311: KUMA	2e	2e	---	150.00	42.00	---
4472: LAS ANIMAS	5w	---	---	---	---	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Deuel County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Winter wheat-fallow	
	N	I	N	I	N	I
			Bu		Bu	
4475: LAS ANIMAS------	2w	2w	---	125.00	35.00	---
4592: LEXSWORTH-------	3w	3w	---	140.00	35.00	---
4655: LODGEPOLE-------	3w	4w	---	90.00	35.00	---
5212: MERRICK---------	2c	1	---	150.00	44.00	---
6132: PLATTE----------	6w	4w	---	80.00	30.00	---
6248: RALTON----------	2c	1	---	150.00	42.00	---
6625: SARBEN----------	4e	3e	---	115.00	28.00	---
6626: SARBEN----------	4e	4e	---	110.00	26.00	---
6722: SATANTA---------	3e	3e	---	135.00	32.00	---
ALTVAN----------	4e	4e	---	110.00	28.00	---
6725: ASCALON---------	3e	2e	---	135.00	35.00	---
SATANTA---------	3e	2e	---	140.00	38.00	---
6727: SATANTA---------	2e	2e	---	145.00	40.00	---
JOHNSTOWN-------	2e	2e	---	145.00	41.00	---
ALTVAN----------	3e	2s	---	125.00	34.00	---
6817: SCOVILLE--------	4e	4e	---	110.00	22.00	---
6930: SIDNEY----------	3e	3e	---	125.00	30.00	---
6937: SIDNEY----------	4e	4e	---	100.00	25.00	---
CANYON----------	6s	---	---	50.00	10.00	---
7120: SULCO-----------	4e	3e	---	115.00	28.00	---
MCCONAUGHY------	4e	3e	---	125.00	30.00	---
7121: SULCO-----------	4e	4e	---	110.00	28.00	---
MCCONAUGHY------	4e	4e	---	115.00	28.00	---
7122: SULCO-----------	6e	---	---	---	---	---
MCCONAUGHY------	6e	---	---	---	---	---
7582: VALENT----------	6e	4e	---	105.00	20.00	---
7586: VALENT----------	6e	---	---	---	---	---
7588: VALENT----------	6e	---	---	---	---	---
VALENT----------	7e	---	---	---	---	---
9975:	---	---	---	---	---	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Deuel County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Corn		Winter wheat-fallow	
	N	I	N	I	N	I
			Bu		Bu	
9985: PITS	8s	---	---	---	---	---
9998: WATER	---	---	---	---	---	---

Farmland Classification
Deuel County, Nebraska : Update

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in the following table. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in the "Acres and Proportionate Extent of Soils" table. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described in other tables in this document."

Map symbol	Mapunit name	Farmland Classification
1130	Alliance loam, 0 to 1 percent slopes	Prime farmland if irrigated
1146	Alliance-rosebud loams, 1 to 3 percent slopes	Prime farmland if irrigated
2072	Chappell-alice-broadwater complex, 0 to 3 percent slopes	Prime farmland if irrigated
2630	Duroc loam, 0 to 1 percent slopes	Prime farmland if irrigated
2638	Duroc loam, terrace, 0 to 1 percent slopes	Prime farmland if irrigated
2639	Duroc loam, terrace, 1 to 3 percent slopes	Prime farmland if irrigated
3050	Glenberg fine sandy loam, 0 to 1 percent slopes, rarely flooded	Prime farmland if irrigated
4028	Jayem fine sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated
4070	Johnstown-satanta-richfield loams, 0 to 1 percent slopes	Prime farmland if irrigated
4151	Keith loam, 1 to 3 percent slopes	Prime farmland if irrigated
4152	Keith loam, 3 to 6 percent slopes	Prime farmland if irrigated
4310	Kuma loam, 0 to 1 percent slopes	Prime farmland if irrigated
4311	Kuma loam, 1 to 3 percent slopes	Prime farmland if irrigated
4592	Lexsworth loam, 0 to 1 percent slopes, very rarely flooded	Prime farmland if irrigated
5212	Merrick sandy clay loam, 0 to 1 percent slopes, very rarely flooded	Prime farmland if irrigated
6248	Ralton loam, 0 to 1 percent slopes, very rarely flooded	Prime farmland if irrigated
6722	Satanta-altvan complex, 3 to 6 percent slopes	Prime farmland if irrigated
6725	Satanta-ascalon complex, 0 to 2 percent slopes	Prime farmland if irrigated
6727	Satanta-johnstown-altvan loams, 1 to 3 percent slopes	Prime farmland if irrigated
6930	Sidney loam, 3 to 6 percent slopes	Prime farmland if irrigated
7120	Sulco-mcconaughy loams, 3 to 6 percent slopes, moderately eroded	Prime farmland if irrigated
4475	Las animas loam, 0 to 1 percent slopes, occasionally flooded	Prime farmland if irrigated and drained

SOIL RATING FOR PLANT GROWTH, modified 1998
Deuel County, Nebraska

The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
1130	Alliance Loam, 0 To 1 Percent Slopes	56
1146	Alliance-Rosebud Loams, 1 To 3 Percent Slopes	46
1198	Altvan-Eckley-Satanta Complex, 3 To 9 Percent Slopes	38
1295	Ashollow-Tassel Complex, 9 To 30 Percent Slopes	26
1588	Blueridge-Altvan Complex, 6 To 30 Percent Slopes	23
1782	Broadwater Loamy Sand, 0 To 1 Percent Slopes, Frequently Flooded	17
1944	Calamus Sand, 0 To 1 Percent Slopes, Very Rarely Flooded	23
2072	Chappell-Alice-Broadwater Complex, 0 To 3 Percent Slopes	36
2630	Duroc Loam, 0 To 1 Percent Slopes	60
2638	Duroc Loam, Terrace, 0 To 1 Percent Slopes	59
2639	Duroc Loam, Terrace, 1 To 3 Percent Slopes	58
3050	Glenberg Fine Sandy Loam, 0 To 1 Percent Slopes, Rarely Flooded	35
3140	Gothenburg Soils, 0 To 1 Percent Slopes, Occasionally Flooded	17
3952	Jankosh Loam, 0 To 1 Percent Slopes, Rarely Flooded	26
4028	Jayem Fine Sandy Loam, 0 To 2 Percent Slopes	50
4070	Johnstown-Satanta-Richfield Loams, 0 To 1 Percent Slopes	60
4151	Keith Loam, 1 To 3 Percent Slopes	62
4152	Keith Loam, 3 To 6 Percent Slopes	58
4310	Kuma Loam, 0 To 1 Percent Slopes	60
4311	Kuma Loam, 1 To 3 Percent Slopes	62
4472	Las Animas Loam, 0 To 1 Percent Slopes, Channeled, Frequently Flooded	31
4475	Las Animas Loam, 0 To 1 Percent Slopes, Occasionally Flooded	39
4592	Lexsworth Loam, 0 To 1 Percent Slopes, Very Rarely Flooded	31
4655	Lodgepole Silt Loam, Ponded	10
5212	Merrick Sandy Clay Loam, 0 To 1 Percent Slopes, Very Rarely Flooded	58
6132	Platte Loam, 0 To 1 Percent Slopes, Occasionally Flooded	27
6248	Ralton Loam, 0 To 1 Percent Slopes, Very Rarely Flooded	49
6625	Sarben Loamy Fine Sand, 0 To 3 Percent Slopes	34
6626	Sarben Loamy Fine Sand, 3 To 6 Percent Slopes	33
6722	Satanta-Altvan Complex, 3 To 6 Percent Slopes	51
6725	Satanta-Ascalon Complex, 0 To 2 Percent Slopes	57
6727	Satanta-Johnstown-Altvan Loams, 1 To 3 Percent Slopes	57
6817	Scoville Loamy Fine Sand, 0 To 3 Percent Slopes	31
6930	Sidney Loam, 3 To 6 Percent Slopes	51
6937	Sidney-Canyon Loams, 3 To 9 Percent Slopes	39
7120	Sulco-Mcconaughy Loams, 3 To 6 Percent Slopes, Moderately Eroded	52
7121	Sulco-Mcconaughy Loams, 6 To 9 Percent Slopes, Moderately Eroded	48
7122	Sulco-Mcconaughy Loams, 9 To 20 Percent Slopes, Moderately Eroded	41
7582	Valent Fine Sand, 3 To 9 Percent Slopes	19
7586	Valent Fine Sand, Rolling	14
7588	Valent Complex, Rolling And Hilly	8
9975	Sanitary Landfill	0
9985	Pits, Sand And Gravel	15
9998	Water	0

Deuel County, Nebraska: Update
Field Office Thunderbook: Soils Properties for Conservation Planning

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
1130:ALLIANCE---	90	1-4	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	4	5	56
1146:ALLIANCE---	65	2e-4	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	4	5	56
1146:ROSEBUD----	25	3e-7	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	6	.28	.28	3	5	56
1198:ALTVAN-----	45	4e-7	4e	Not prime farmland	B	Silty - Veg. Zone 2	3	.20	.20	4	5	56
1198:ECKLEY-----	30	N/A	6e	Not prime farmland	B	Shallow To Gravel - Veg. Zone 2	10	.20	.28	3	3	86
1198:SATANTA----	20	4e-4	4e	Not prime farmland	B	Silty - Veg. Zone 2	3	.28	.28	5	6	48
1295:ASHOLLOW---	65	N/A	6e	Not prime farmland	B	Sandy - Veg. Zone 2	8	.37	.37	5	3	86
1295:TASSEL-----	30	N/A	6s	Not prime farmland	D	Shallow Limy - Veg. Zone 2	10	.24	.24	2	3	86
1588:BLUERIDGE--	50	N/A	6s	Not prime farmland	A	Shallow To Gravel - Veg. Zone 2	10	.10	.10	2	1	160
1588:ALTVAN-----	35	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 2	10	.28	.28	4	5	56
1782:BROADWATER-	90	N/A	6w	Not prime farmland	A	Shallow To Gravel - Veg. Zone 2	10	.17	.17	3	2	134
1944:CALAMUS----	95	4s-14	6s	Not prime farmland	A	Sandy 17-22" P.z.	7	.17	.17	5	2	134
2072:CHAPPELL---	38	2e-9	3e	Prime farmland if irrigated	A	Sandy - Veg. Zone 2	6G	.20	.20	4	3	86
2072:ALICE------	33	2e-8	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2	5	.20	.20	5	3	86
2072:BROADWATER-	24	N/A	6w	Prime farmland if irrigated	A	Shallow To Gravel - Veg. Zone 2	10	.17	.17	3	2	134
2630:DUROC------	90	1-6	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
2638:DUROC------	90	1-6	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
2639:DUROC------	90	2e-6	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
3050:GLENBERG---	90	2e-8	3e	Prime farmland if irrigated	B	Sandy Lowland - Veg. Zone 1	1	.24	.24	5	3	86
3140:GOTHENBURG-	85	N/A	7s	Not prime farmland	D	Unspecified	10	.17	.17	2	8	134
3952:JANKOSH----	85	4s-6	6s	Not prime farmland	C	Saline Subirrigated - Veg. Zone 2	10	.32	.32	2	4L	86
4028:JAYEM------	90	2e-8	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2	5	.20	.20	5	3	86
4070:JOHNSTOWN--	35	1-4	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	4	5	56
4070:SATANTA----	31	1-4	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	6	48
4070:RICHFIELD--	29	1-4	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.32	.32	5	6	48
4151:KEITH------	90	2e-4	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
4152:KEITH------	90	3e-4	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
4310:KUMA-------	95	1-4	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
4311:KUMA-------	90	2e-4	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
4472:LAS ANIMAS-	95	N/A	5w	Not prime farmland	D	Silty Overflow - Veg. Zone 2	10	.32	.32	4	4L	86
4475:LAS ANIMAS-	92	2w-8	2w	Prime farmland if irrigated and drained	D	Subirrigated - Veg. Zone 2	2	.32	.32	4	4L	86
4592:LEXSWORTH--	85	3w-7	3w	Prime farmland if irrigated	B	Silty Lowland - Veg. Zone 2	6G	.28	.28	4	5	56
4655:LODGEPOLE--	95	4w-2	3w	Not prime farmland	D	Clayey Overflow - Veg. Zone 2	2	.37	.37	3	6	48

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
5212:MERRICK----	90	1-6	2c	Prime farmland if irrigated	B	Silty Lowland - Veg. Zone 2	1	.28	.28	5	6	48
6132:PLATTE-----	90	4w-13	6w	Not prime farmland	B	Subirrigated - Veg. Zone 2	2	.28	.28	3	4L	86
6248:RALTON-----	90	1-6	2c	Prime farmland if irrigated	B	Silty Lowland - Veg. Zone 2	1	.28	.28	5	4L	86
6625:SARBEN-----	90	3e-10	4e	Not prime farmland	B	Sandy - Veg. Zone 2	5	.17	.17	5	2	134
6626:SARBEN-----	90	4e-10	4e	Not prime farmland	B	Sandy - Veg. Zone 2	5	.17	.17	5	2	134
6722:SATANTA----	65	3e-4	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.43	.43	5	6	48
6722:ALTVAN-----	25	4e-7	4e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	6G	.20	.20	4	5	56
6725:SATANTA----	45	2e-5	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	5	.28	.28	5	3	86
6725:ASCALON----	45	2e-5	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2	5	.20	.20	5	3	86
6727:SATANTA----	60	2e-4	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	6	48
6727:JOHNSTOWN--	18	2e-4	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	4	5	56
6727:ALTVAN-----	15	2s-7	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	6G	.28	.28	4	5	56
6817:SCOVILLE---	95	4e-11	4e	Not prime farmland	A	Sandy - Veg. Zone 2	5	.17	.17	5	2	134
6930:SIDNEY-----	85	3e-6	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	4	5	56
6937:SIDNEY-----	65	4e-6	4e	Not prime farmland	B	Silty - Veg. Zone 2	3	.28	.28	4	5	56
6937:CANYON-----	25	N/A	6s	Not prime farmland	D	Shallow Limy - Veg. Zone 2	10	.32	.32	2	4L	86
7120:SULCO------	55	3e-6	4e	Prime farmland if irrigated	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro-logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
								K	Kf	T		
7120:MCCONAUGHY-	30	3e-6	4e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
7121:SULCO------	65	4e-6	4e	Not prime farmland	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86
7121:MCCONAUGHY-	25	4e-6	4e	Not prime farmland	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
7122:SULCO------	70	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86
7122:MCCONAUGHY-	20	N/A	6e	Not prime farmland	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
7582:VALENT-----	90	4e-12	6e	Not prime farmland	A	Sands 17-22" P.z.	7	.15	.15	5	1	250
7586:VALENT-----	95	N/A	6e	Not prime farmland	A	Sands 17-22" P.z.	7	.15	.15	5	1	250
7588:VALENT-----	50	N/A	6e	Not prime farmland	A	Sands 17-22" P.z.	7	.15	.15	5	1	250
	45	N/A	7e	Not prime farmland	A	Choppy Sands 17-22" P.z.	10	.15	.15	5	1	250
9975:----------		N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	---
9985:PITS-------	100	N/A	8s	Not prime farmland	A	Unspecified	10	.10	.17	2	8	0
9998:WATER------	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	0

RANGELAND PRODUCTIVITY
Deuel County, Nebraska

Use and Explanation of Rangeland, Grazed Forest Land, Native Pastureland Interpretations

Information in this subsection can be used to plan the use and management of soils for rangeland, grazed forest land, and native pasture. Different kinds of soils vary in their capacity to produce native grasses and other plants suitable for grazing. Information in this subsection provides groupings of similar soils and estimates of potential forage production, which can be used to determine livestock stocking rates.

Rangeland. Range is land on which the native vegetation (climax or natural potential plant community) is predominantly grasses, grasslike plants, forbs, and shrubs suitable for grazing and browsing. Range includes natural grasslands, savannas, many wetlands, some deserts, tundra, and certain shrub and forb communities. Rangeland receives no regular or frequent cultural treatment. The composition and production of the plant community are determined by soil, climate, topography, overstory canopy, and grazing management.

Grazed Forest Land. Includes land on which the understory includes, as an integral part of the forest plant community, plants that can be grazed without significantly impairing other forest values.

Native Pasture. Includes land on which the native vegetation (climax or natural potential plant community) is forest but which is used and managed primarily for production of native plants for forage. Native pasture includes cut-over forest land and forest land cleared and now managed for native or naturalized forage plants.

Rangeland

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management based on the relationship between the soils and vegetation and water.

The Rangeland, Grazed Forest land, Native Pastureland Interpretations shows, for each soil that supports rangeland vegetation, the ecological site and the potential annual production of vegetation in favorable, normal, unfavorable years. An explanation of the column headings in this table follows.

An ecological site is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of a site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Total dry-weight production is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, average, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the National Range and Pasture Handbook, which is available in local offices of the Natural Resources Conservation Service. The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

RANGELAND PRODUCTIVITY--Continued
Deuel County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
1130:				
Alliance	Silty - Veg. Zone 2	3,300	2,500	1,700
1146:				
Alliance	Silty - Veg. Zone 2	3,300	2,500	1,700
Rosebud	Silty - Veg. Zone 2	3,300	2,500	1,700
1198:				
Altvan	Silty - Veg. Zone 2	2,100	1,700	1,300
Eckley	Shallow To Gravel - Veg. Zone 2	1,400	1,200	800
Satanta, sandy substratum	Silty - Veg. Zone 2	3,200	2,500	1,800
1295:				
Ashollow	Sandy - Veg. Zone 2	2,300	1,600	1,200
Tassel	Shallow Limy - Veg. Zone 2	1,200	1,100	900
1588:				
Blueridge	Shallow To Gravel - Veg. Zone 2	1,300	900	600
Altvan	Silty - Veg. Zone 2	2,100	1,700	1,300
1782:				
Broadwater, frequently flooded	Shallow To Gravel - Veg. Zone 2	1,250	900	600
1944:				
Calamus, very rarely flooded	Sandy 17-22" P.z.	2,600	2,200	1,600
2072:				
Chappell	Sandy - Veg. Zone 2	2,600	2,300	1,900
Alice	Sandy - Veg. Zone 2	2,300	1,600	1,100
Broadwater	Shallow To Gravel - Veg. Zone 2	1,250	900	600
2630:				
Duroc	Silty - Veg. Zone 2	3,300	2,500	1,700
2638:				
Duroc	Silty - Veg. Zone 2	3,300	2,500	1,700
2639:				
Duroc	Silty - Veg. Zone 2	3,300	2,500	1,700
3050:				
Glenberg, rarely flooded	Sandy Lowland - Veg. Zone 1	2,800	2,100	1,300
3140:				
Gothenburg, occasionally flooded	---	---	---	---
3952:				
Jankosh	Saline Subirrigated - Veg. Zone 2	2,900	2,600	2,300
4028:				
Jayem	Sandy - Veg. Zone 2	3,000	2,300	1,600
4070:				
Johnstown	Silty - Veg. Zone 2	3,200	2,500	1,800
Satanta, sandy substratum	Silty - Veg. Zone 2	3,200	2,500	1,800
Richfield	Silty - Veg. Zone 2	3,200	2,500	1,800
4151:				
Keith	Silty - Veg. Zone 2	3,300	2,500	1,700
4152:				
Keith	Silty - Veg. Zone 2	3,300	2,500	1,700
4310:				
Kuma	Silty - Veg. Zone 2	3,300	2,500	1,700
4311:				
Kuma	Silty - Veg. Zone 2	3,300	2,500	1,700
4472:				
Las Animas, frequently flooded	Silty Overflow - Veg. Zone 2	5,000	4,500	4,000
4475:				
Las Animas, occasionally flooded	Subirrigated - Veg. Zone 2	5,000	4,500	4,000
4592:				
Lexsworth, very rarely flooded	Silty Lowland - Veg. Zone 2	2,800	2,000	1,500
4655:				
Lodgepole, ponded	Clayey Overflow - Veg. Zone 2	1,200	1,000	700
5212:				
Merrick, very rarely flooded	Silty Lowland - Veg. Zone 2	3,800	3,000	2,300
6132:				
Platte, occasionally flooded	Subirrigated - Veg. Zone 2	4,500	4,100	3,700
6248:				
Ralton, very rarely flooded	Silty Lowland - Veg. Zone 2	3,800	2,800	2,300
6625:				
Sarben	Sandy - Veg. Zone 2	3,000	2,600	2,200
6626:				
Sarben	Sandy - Veg. Zone 2	3,000	2,600	2,200
6722:				
Satanta	Silty - Veg. Zone 2	3,200	2,500	1,800
Altvan	Silty - Veg. Zone 2	2,900	2,500	2,100
6725:				
Ascalon	Sandy - Veg. Zone 2	3,000	2,300	1,600
Satanta, sandy substratum	Silty - Veg. Zone 2	3,200	2,500	1,800
6727:				
Satanta, sandy substratum	Silty - Veg. Zone 2	3,200	2,500	1,800
Johnstown	Silty - Veg. Zone 2	3,800	3,500	3,000
Altvan	Silty - Veg. Zone 2	2,900	2,500	2,100
6817:				
Scoville	Sandy - Veg. Zone 2	2,300	1,600	1,100
6930:				

RANGELAND PRODUCTIVITY--Continued
Deuel County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Sidney	Silty - Veg. Zone 2	2,200	1,500	1,000
6937:				
Sidney	Silty - Veg. Zone 2	2,200	1,500	1,000
Canyon	Shallow Limy - Veg. Zone 2	1,500	1,100	700
7120:				
Sulco, moderately eroded	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
Mcconaughy, moderately eroded	Silty - Veg. Zone 2	3,250	2,500	1,700
7121:				
Sulco, moderately eroded	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
Mcconaughy, moderately eroded	Silty - Veg. Zone 2	3,250	2,500	1,700
7122:				
Sulco, moderately eroded	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
Mcconaughy, moderately eroded	Silty - Veg. Zone 2	3,250	2,500	1,700
7582:				
Valent	Sands 17-22" P.z.	2,800	2,400	1,800
7586:				
Valent	Sands 17-22" P.z.	2,800	2,400	1,800
7588:				
Valent, rolling	Sands 17-22" P.z.	2,800	2,400	1,800
Valent, hilly	Choppy Sands 17-22" P.z.	2,300	1,600	1,200
9975:				
	---	---	---	---
9985:				
Pits	---	---	---	---
9998:				
Water	---	---	---	---

BUILDING SITE DEVELOPMENT
Deuel County, Nebraska

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. These tables show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

BUILDING SITE DEVELOPMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1130:							
Alliance	90	Not limited		Not limited		Not limited	
1146:							
Alliance	65	Not limited		Not limited		Not limited	
Rosebud	25	Not limited		Somewhat limited		Not limited	
				Depth to soft bedrock	0.42		
1198:							
Altvan	45	Not limited		Not limited		Somewhat limited	
						Slope	0.48
Eckley	30	Not limited		Not limited		Somewhat limited	
						Slope	0.48
Satanta, sandy substratum	20	Not limited		Not limited		Somewhat limited	
						Slope	0.48
1295:							
Ashollow	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
Tassel	30	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to soft bedrock	1.00
1588:							
Blueridge	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Altvan	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.00	Slope	0.00	Slope	1.00
1782:							
Broadwater, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
1944:							
Calamus, very rarely flooded	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35		
2072:							
Chappell	38	Not limited		Not limited		Not limited	
Alice	33	Not limited		Not limited		Not limited	
Broadwater	24	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
2630:							
Duroc	90	Not limited		Not limited		Not limited	
2638:							
Duroc	90	Not limited		Not limited		Not limited	
2639:							
Duroc	90	Not limited		Not limited		Not limited	
3050:							
Glenberg, rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
3140:							
Gothenburg, occasionally flooded	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3952:							
Jankosh	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
4028:							
Jayem	90	Not limited		Not limited		Not limited	
4070:							
Johnstown	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Satanta, sandy substratum	31	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
Richfield	29	Not limited		Not limited		Not limited	
4151:							
Keith	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50

BUILDING SITE DEVELOPMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4152:							
Keith	90	Not limited		Not limited		Somewhat limited	
						Slope	0.03
4310:							
Kuma	95	Not limited		Not limited		Not limited	
4311:							
Kuma	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
4472:							
Las Animas, frequently flooded-	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
4475:							
Las Animas, occasionally flooded	92	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
4592:							
Lexsworth, very rarely flooded	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
4655:							
Lodgepole, ponded---	95	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00			Shrink-swell	1.00
5212:							
Merrick, very rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to saturated zone	0.15		
6132:							
Platte, occasionally flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
6248:							
Ralton, very rarely flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
				Depth to saturated zone	0.35		
6625:							
Sarben	90	Not limited		Not limited		Not limited	
6626:							
Sarben	90	Not limited		Not limited		Somewhat limited	
						Slope	0.03
6722:							
Satanta	65	Not limited		Not limited		Somewhat limited	
						Slope	0.03
Altvan	25	Not limited		Not limited		Somewhat limited	
						Slope	0.03
6725:							
Ascalon	45	Not limited		Not limited		Not limited	
Satanta, sandy substratum	45	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
6727:							
Satanta, sandy substratum	60	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
Johnstown	18	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
Altvan	15	Not limited		Not limited		Not limited	
6817:							
Scoville	95	Not limited		Not limited		Not limited	
6930:							
Sidney	85	Not limited		Not limited		Somewhat limited	
						Slope	0.03

BUILDING SITE DEVELOPMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6937:							
Sidney	65	Not limited		Not limited		Somewhat limited	
						Slope	0.96
Canyon	25	Somewhat limited		Very limited		Somewhat limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to soft bedrock	1.00
						Slope	0.96
7120:							
Sulco, moderately eroded	55	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Mcconaughy, moderately eroded--	30	Not limited		Not limited		Somewhat limited	
						Slope	0.00
7121:							
Sulco, moderately eroded	65	Not limited		Not limited		Somewhat limited	
						Slope	0.96
Mcconaughy, moderately eroded--	25	Not limited		Not limited		Somewhat limited	
						Slope	0.96
7122:							
Sulco, moderately eroded	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Mcconaughy, moderately eroded--	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
7582:							
Valent	90	Not limited		Not limited		Somewhat limited	
						Slope	0.48
7586:							
Valent	95	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
7588:							
Valent, rolling	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Valent, hilly	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
9985:							
Pits	100	Not rated		Not rated		Not rated	
9998:							
Water	100	Not rated		Not rated		Not rated	

BUILDING SITE DEVELOPMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1130:							
Alliance	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
1146:							
Alliance	65	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Rosebud	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Depth to soft bedrock	0.42	Depth to bedrock	0.42
				Cutbanks cave	0.10		
1198:							
Altvan	45	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Eckley	30	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.89
Satanta, sandy substratum	20	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
1295:							
Ashollow	65	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
				Cutbanks cave	0.10		
Tassel	30	Very limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
				Cutbanks cave	0.10	Slope	1.00
1588:							
Blueridge	50	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Too sandy	1.00
				Slope	1.00	Droughty	1.00
						Slope	1.00
						Gravel content	0.03
Altvan	35	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.00
		Slope	0.00	Slope	0.00		
1782:							
Broadwater, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
				Flooding	0.80	Droughty	1.00
1944:							
Calamus, very rarely flooded	95	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.20	Cutbanks cave	1.00	Droughty	0.75
				Depth to saturated zone	0.35		
2072:							
Chappell	38	Not limited		Very limited		Not limited	
				Cutbanks cave	1.00		
Alice	33	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Broadwater	24	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Droughty	1.00
				Flooding	0.60	Flooding	0.60
2630:							
Duroc	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
2638:							
Duroc	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
2639:							
Duroc	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
3050:							
Glenberg, rarely flooded	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
		Flooding	0.40				
3140:							
Gothenburg, occasionally flooded	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Droughty	1.00
		Depth to saturated zone	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Flooding	0.60	Flooding	0.60

BUILDING SITE DEVELOPMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3952:							
Jankosh	85	Somewhat limited		Very limited		Very limited	
		Frost action	0.50	Cutbanks cave	1.00	Sodium content	1.00
		Flooding	0.40	Depth to saturated zone	1.00	Salinity	1.00
		Depth to saturated zone	0.03			Depth to saturated zone	0.03
4028:							
Jayem	90	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
4070:							
Johnstown	35	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
Satanta, sandy substratum	31	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
Richfield	29	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.22	Too clayey	0.12		
				Cutbanks cave	0.10		
4151:							
Keith	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
4152:							
Keith	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
4310:							
Kuma	95	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
4311:							
Kuma	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
		Frost action	0.50				
4472:							
Las Animas, frequently flooded	95	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.80		
4475:							
Las Animas, occasionally flooded	92	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Flooding	0.60
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.03
		Depth to saturated zone	0.03	Flooding	0.60		
4592:							
Lexsworth, very rarely flooded	85	Very limited		Very limited		Not limited	
		Frost action	1.00	Cutbanks cave	1.00		
		Flooding	0.20				
4655:							
Lodgepole, ponded	95	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00				
5212:							
Merrick, very rarely flooded	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Depth to saturated zone	0.15		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
		Flooding	0.20				

BUILDING SITE DEVELOPMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6132:							
Platte, occasionally flooded	90	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	0.60
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Flooding	0.60	Droughty	0.05
6248:							
Ralton, very rarely flooded	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Depth to saturated zone	0.35		
		Flooding	0.20	Cutbanks cave	0.10		
6625:							
Sarben	90	Not limited		Somewhat limited		Somewhat limited	
				Cutbanks cave	0.10	Droughty	0.01
6626:							
Sarben	90	Not limited		Somewhat limited		Somewhat limited	
				Cutbanks cave	0.10	Droughty	0.01
6722:							
Satanta	65	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Altvan	25	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
6725:							
Ascalon	45	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Satanta, sandy substratum	45	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
6727:							
Satanta, sandy substratum	60	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
Johnstown	18	Very limited		Very limited		Not limited	
		Low strength	1.00	Cutbanks cave	1.00		
		Shrink-swell	0.50				
		Frost action	0.50				
Altvan	15	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
6817:							
Scoville	95	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.61
6930:							
Sidney	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
6937:							
Sidney	65	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Canyon	25	Somewhat limited		Very limited		Very limited	
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
				Cutbanks cave	0.10	Droughty	1.00
7120:							
Sulco, moderately eroded	55	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
Mcconaughy, moderately eroded	30	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
7121:							
Sulco, moderately eroded	65	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
Mcconaughy, moderately eroded	25	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		

BUILDING SITE DEVELOPMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7122:							
Sulco, moderately eroded	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10		
Mcconaughy, moderately eroded	20	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
7582:							
Valent	90	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.89
7586:							
Valent	95	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.89
7588:							
Valent, rolling	50	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.89
Valent, hilly	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.89
9985:							
Pits	100	Not rated		Not rated		Not rated	
9998:							
Water	100	Not rated		Not rated		Not rated	

CONSTRUCTION MATERIALS
Deuel County, Nebraska

Construction Materials

These tables give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a probable or improbable source of sand and gravel. A rating of probable means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the first table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1130:					
Alliance	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
1146:					
Alliance	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.05
Rosebud	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
1198:					
Altvan	45	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.06
		Thickest layer	0.00	Bottom layer	0.95
Eckley	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.95
Satanta, sandy substratum	20	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00		
1295:					
Ashollow	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.07
		Thickest layer	0.00	Thickest layer	0.07
Tassel	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
1588:					
Blueridge	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.91
		Thickest layer	0.00	Thickest layer	0.91
Altvan	35	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.04
		Thickest layer	0.00		
1782:					
Broadwater, frequently flooded	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.59
		Thickest layer	0.00	Bottom layer	0.97
1944:					
Calamus, very rarely flooded	95	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.17
		Thickest layer	0.00	Thickest layer	0.17
2072:					
Chappell	38	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.91
Alice	33	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.08
		Thickest layer	0.00	Thickest layer	0.08
Broadwater	24	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.59
		Thickest layer	0.00	Bottom layer	0.97
2630:					
Duroc	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
2638:					
Duroc	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
2639:					
Duroc	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
3050:					
Glenberg, rarely flooded	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.08
3140:					
Gothenburg, occasionally flooded	85	Poor		Good	
		Bottom layer	0.00	Bottom layer	0.97
		Thickest layer	0.00		
3952:					
Jankosh	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.07
		Thickest layer	0.00	Bottom layer	0.97
4028:					
Jayem	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.09
		Thickest layer	0.00	Thickest layer	0.09
4070:					
Johnstown	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.97
Satanta, sandy substratum	31	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.07
		Thickest layer	0.00		
Richfield	29	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.10
		Thickest layer	0.00	Bottom layer	0.95
4151:					
Keith	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.05
4152:					
Keith	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4310:					
Kuma	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4311:					
Kuma	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
4472:					
Las Animas, frequently flooded	95	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.02
		Thickest layer	0.00	Bottom layer	0.04
4475:					
Las Animas, occasionally flooded	92	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.02
		Thickest layer	0.00	Bottom layer	0.04

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
4592:					
Lexsworth, very rarely flooded-----	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.30
		Thickest layer	0.00	Bottom layer	0.97
4655:					
Lodgepole, ponded---	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
5212:					
Merrick, very rarely flooded----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.06
6132:					
Platte, occasionally flooded----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.97
6248:					
Ralton, very rarely flooded----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.05
		Thickest layer	0.00	Bottom layer	0.23
6625:					
Sarben----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.09
		Thickest layer	0.00	Thickest layer	0.09
6626:					
Sarben----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.09
		Thickest layer	0.00	Thickest layer	0.09
6722:					
Satanta----------	65	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.07
		Thickest layer	0.00	Bottom layer	0.39
Altvan----------	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.07
		Thickest layer	0.00	Bottom layer	0.97
6725:					
Ascalon----------	45	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.04
		Thickest layer	0.00	Thickest layer	0.08
Satanta, sandy substratum---------	45	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.07
		Thickest layer	0.00		
6727:					
Satanta, sandy substratum---------	60	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.07
		Thickest layer	0.00		
Johnstown----------	18	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00		
Altvan----------	15	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.97
6817:					
Scoville----------	95	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.39
		Thickest layer	0.00	Thickest layer	0.74

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
6930:					
Sidney	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
6937:					
Sidney	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.06
Canyon	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7120:					
Sulco, moderately eroded	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mcconaughy, moderately eroded	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7121:					
Sulco, moderately eroded	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mcconaughy, moderately eroded	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7122:					
Sulco, moderately eroded	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mcconaughy, moderately eroded	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7582:					
Valent	90	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.99
		Thickest layer	0.00		
7586:					
Valent	95	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.99
		Thickest layer	0.00		
7588:					
Valent, rolling	50	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.99
		Thickest layer	0.00		
Valent, hilly	45	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.99
		Thickest layer	0.00		
9985:					
Pits	100	Not rated		Not rated	
9998:					
Water	100	Not rated		Not rated	

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1130:							
Alliance	90	Fair		Fair		Good	
		Low content of organic matter	0.88	Depth to bedrock	0.87		
		Water erosion	0.99				
1146:							
Alliance	65	Fair		Fair		Good	
		Low content of organic matter	0.88	Depth to bedrock	0.58		
		Water erosion	0.99				
Rosebud	25	Fair		Poor		Fair	
		Depth to bedrock	0.58	Depth to bedrock	0.00	Depth to bedrock	0.58
		Low content of organic matter	0.88				
		Water erosion	0.90				
		Droughty	0.92				
1198:							
Altvan	45	Fair		Good		Fair	
		Low content of organic matter	0.88			Hard to reclaim	0.65
		Water erosion	0.99			Hard to reclaim	0.97
Eckley	30	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim	0.00
		Droughty	0.11			Too sandy	0.00
		Low content of organic matter	0.88			Rock fragments	0.02
						Hard to reclaim	0.97
Satanta, sandy substratum	20	Fair		Good		Good	
		Low content of organic matter	0.12				
		Water erosion	0.90				
1295:							
Ashollow	65	Fair		Good		Fair	
		Low content of organic matter	0.88			Slope	0.16
		Water erosion	0.90				
Tassel	30	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00	Slope	0.50	Slope	0.00
		Low content of organic matter	0.12			Rock fragments	0.00
1588:							
Blueridge	50	Poor		Fair		Poor	
		Too sandy	0.00	Slope	0.82	Hard to reclaim	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Slope	0.00
		Low content of organic matter	0.12			Rock fragments	0.03
						Hard to reclaim	0.98
Altvan	35	Fair		Good		Fair	
		Low content of organic matter	0.12			Hard to reclaim	0.92
1782:							
Broadwater, frequently flooded	90	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Rock fragments	0.03
		Low content of organic matter	0.12			Hard to reclaim	0.98
1944:							
Calamus, very rarely flooded	95	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Hard to reclaim	0.92
		Droughty	0.03			Hard to reclaim	0.99
		Low content of organic matter	0.12				

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2072:							
Chappell----------	38	Fair		Good		Fair	
		Low content of organic matter	0.12			Hard to reclaim	0.54
		Droughty	0.92			Hard to reclaim	0.92
Alice----------	33	Fair		Good		Good	
		Low content of organic matter	0.88				
Broadwater----------	24	Poor		Good		Poor	
		Too sandy	0.00			Hard to reclaim	0.00
		Wind erosion	0.00			Too sandy	0.00
		Droughty	0.00			Rock fragments	0.03
		Low content of organic matter	0.12			Hard to reclaim	0.98
2630:							
Duroc----------	90	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
2638:							
Duroc----------	90	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
2639:							
Duroc----------	90	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
3050:							
Glenberg, rarely flooded----------	90	Fair		Good		Good	
		Low content of organic matter	0.88				
3140:							
Gothenburg, occasionally flooded----------	85	Poor		Poor		Poor	
		Too sandy	0.00	Depth to saturated zone	0.00	Hard to reclaim	0.00
		Droughty	0.00			Too sandy	0.00
		Low content of organic matter	0.12			Depth to saturated zone	0.00
						Rock fragments	0.03
						Hard to reclaim	0.98
3952:							
Jankosh----------	85	Poor		Fair		Poor	
		Sodium content	0.00	Depth to saturated zone	0.76	Sodium content	0.00
		Too alkaline	0.00			Salinity	0.00
		Low content of organic matter	0.12			Depth to saturated zone	0.76
		Salinity	0.88			Hard to reclaim	0.80
		Water erosion	0.90			Hard to reclaim	0.80
4028:							
Jayem----------	90	Fair		Good		Good	
		Low content of organic matter	0.18				
4070:							
Johnstown----------	35	Fair		Poor		Fair	
		Too clayey	0.98	Low strength	0.00	Too Clayey	0.81
		Water erosion	0.99			Hard to reclaim	0.98
Satanta, sandy substratum----------	31	Fair		Good		Good	
		Low content of organic matter	0.12				
		Water erosion	0.90				

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Richfield----------	29	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
4151:							
Keith----------	90	Fair		Fair		Fair	
		Low content of organic matter	0.12	Low strength	0.78	Too Clayey	0.66
		Water erosion	0.90				
		Too clayey	0.92				
4152:							
Keith----------	90	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.90				
4310:							
Kuma----------	95	Fair		Good		Good	
		Low content of organic matter	0.88				
		Water erosion	0.99				
4311:							
Kuma----------	90	Fair		Good		Fair	
		Low content of organic matter	0.88			Too Clayey	0.81
		Water erosion	0.90				
		Too clayey	0.98				
4472:							
Las Animas, frequently flooded-	95	Fair		Poor		Poor	
		Low content of organic matter	0.88	Depth to saturated zone	0.00	Depth to saturated zone	0.00
4475:							
Las Animas, occasionally flooded----------	92	Fair		Fair		Fair	
		Low content of organic matter	0.88	Depth to saturated zone	0.76	Depth to saturated zone	0.76
4592:							
Lexsworth, very rarely flooded-----	85	Fair		Good		Fair	
		Low content of organic matter	0.12			Hard to reclaim	0.20
4655:							
Lodgepole, ponded---	95	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Too Clayey	0.00
		Low content of organic matter	0.88	Shrink-swell	0.92	Depth to saturated zone	0.00
		Water erosion	0.90				
5212:							
Merrick, very rarely flooded----------	90	Fair		Good		Good	
		Water erosion	0.99				
6132:							
Platte, occasionally flooded----------	90	Poor		Fair		Poor	
		Too sandy	0.00	Depth to saturated zone	0.53	Hard to reclaim	0.00
		Low content of organic matter	0.12			Too sandy	0.00
		Droughty	0.39			Rock fragments	0.03
						Depth to saturated zone	0.53
						Hard to reclaim	0.98

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6248:							
Ralton, very rarely flooded	90	Fair		Good		Good	
		Low content of organic matter	0.50				
		Water erosion	0.90				
6625:							
Sarben	90	Poor		Good		Good	
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.99				
6626:							
Sarben	90	Poor		Good		Good	
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.99				
6722:							
Satanta	65	Fair		Good		Good	
		Low content of organic matter	0.12				
		Water erosion	0.90				
Altvan	25	Fair		Good		Fair	
		Low content of organic matter	0.12			Hard to reclaim	0.98
		Water erosion	0.90			Hard to reclaim	0.99
6725:							
Ascalon	45	Fair		Good		Good	
		Low content of organic matter	0.12				
Satanta, sandy substratum	45	Fair		Good		Good	
		Low content of organic matter	0.12				
		Water erosion	0.90				
6727:							
Satanta, sandy substratum	60	Fair		Good		Good	
		Low content of organic matter	0.12				
		Water erosion	0.90				
Johnstown	18	Fair		Good		Fair	
		Water erosion	0.90			Too Clayey	0.81
		Too clayey	0.98				
Altvan	15	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Low content of organic matter	0.12			Rock fragments	0.50
		Water erosion	0.99			Hard to reclaim	0.54
6817:							
Scoville	95	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00				
		Low content of organic matter	0.12				
		Droughty	0.78				
6930:							
Sidney	85	Fair		Fair		Good	
		Low content of organic matter	0.88	Depth to bedrock	0.58		
		Water erosion	0.99				
6937:							
Sidney	65	Fair		Fair		Good	
		Low content of organic matter	0.88	Depth to bedrock	0.58		
		Water erosion	0.99				

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Canyon	25	Poor Droughty Depth to bedrock	 0.00 0.00	Poor Depth to bedrock	 0.00	Poor Depth to bedrock	 0.00
7120: Sulco, moderately eroded	55	Fair Low content of organic matter Water erosion	 0.88 0.90	Good		Good	
Mcconaughy, moderately eroded	30	Fair Low content of organic matter Water erosion	 0.12 0.90	Good		Good	
7121: Sulco, moderately eroded	65	Fair Low content of organic matter Water erosion	 0.88 0.90	Good		Good	
Mcconaughy, moderately eroded	25	Fair Low content of organic matter Water erosion	 0.12 0.90	Good		Good	
7122: Sulco, moderately eroded	70	Fair Low content of organic matter Water erosion	 0.88 0.90	Good		Poor Slope	 0.00
Mcconaughy, moderately eroded	20	Fair Low content of organic matter Water erosion	 0.12 0.90	Good		Fair Slope	 0.37
7582: Valent	90	Poor Too sandy Wind erosion Droughty Low content of organic matter	 0.00 0.00 0.12 0.12	Good		Poor Too sandy	 0.00
7586: Valent	95	Poor Too sandy Wind erosion Droughty Low content of organic matter	 0.00 0.00 0.12 0.12	Fair Slope	 0.92	Poor Too sandy Slope	 0.00 0.00
7588: Valent, rolling	50	Poor Too sandy Wind erosion Droughty Low content of organic matter	 0.00 0.00 0.12 0.12	Fair Slope	 0.92	Poor Too sandy Slope	 0.00 0.00
Valent, hilly	45	Poor Too sandy Wind erosion Droughty Low content of organic matter	 0.00 0.00 0.12 0.12	Poor Slope	 0.00	Poor Slope Too sandy	 0.00 0.00
9985: Pits	100	Not rated		Not rated		Not rated	

CONSTRUCTION MATERIALS--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9998: Water----------	100	Not rated		Not rated		Not rated	

RECREATIONAL INTERPRETATIONS
Deuel County, Nebraska

Recreation

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

RECREATIONAL INTERPRETATIONS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1130:							
Alliance	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Dusty	0.50
1146:							
Alliance	65	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Slope	0.00
Rosebud	25	Not limited		Not limited		Somewhat limited	
						Slope	0.00
1198:							
Altvan	45	Not limited		Not limited		Very limited	
						Slope	1.00
Eckley	30	Not limited		Not limited		Very limited	
						Slope	1.00
Satanta, sandy substratum	20	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
						Dusty	0.50
1295:							
Ashollow	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Tassel	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
1588:							
Blueridge	50	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.03	Gravel content	0.03	Gravel content	1.00
Altvan	35	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
		Slope	0.00	Slope	0.00	Dusty	0.50
1782:							
Broadwater, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Too sandy	0.91	Flooding	1.00
		Too sandy	0.91	Flooding	0.40	Too sandy	0.91
1944:							
Calamus, very rarely flooded	95	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.91	Too sandy	0.91
		Too sandy	0.91				
2072:							
Chappell	38	Not limited		Not limited		Not limited	
Alice	33	Not limited		Not limited		Not limited	
Broadwater	24	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.91	Too sandy	0.91
		Too sandy	0.91			Flooding	0.60
2630:							
Duroc	90	Not limited		Not limited		Not limited	
2638:							
Duroc	90	Not limited		Not limited		Not limited	
2639:							
Duroc	90	Not limited		Not limited		Not limited	
3050:							
Glenberg, rarely flooded	90	Very limited		Not limited		Not limited	
		Flooding	1.00				
3140:							
Gothenburg, occasionally flooded	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too sandy	0.91	Too sandy	0.91
		Too sandy	0.91			Flooding	0.60
3952:							
Jankosh	85	Very limited		Very limited		Very limited	
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Flooding	1.00	Salinity	1.00	Salinity	1.00
		Salinity	1.00	Depth to saturated zone	0.03	Depth to saturated zone	0.07
		Depth to saturated zone	0.07				
4028:							
Jayem	90	Not limited		Not limited		Not limited	
4070:							
Johnstown	35	Not limited		Not limited		Not limited	
Satanta, sandy substratum	31	Somewhat limited		Somewhat limited		Somewhat limited	

RECREATIONAL INTERPRETATIONS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Richfield----------	29	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Dusty	0.50
		Restricted permeability	0.45	Restricted permeability	0.45	Restricted permeability	0.45
4151:							
Keith--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Slope	0.00
4152:							
Keith--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Slope	0.72
						Dusty	0.50
4310:							
Kuma----------	95	Not limited		Not limited		Not limited	
4311:							
Kuma----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.00
4472:							
Las Animas, frequently flooded-	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Flooding	0.40	Depth to saturated zone	1.00
4475:							
Las Animas, occasionally flooded----------	92	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.03	Flooding	0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
4592:							
Lexsworth, very rarely flooded-----	85	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Dusty	0.50	Dusty	0.50
		Dusty	0.50				
4655:							
Lodgepole, ponded---	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
5212:							
Merrick, very rarely flooded----------	90	Very limited		Not limited		Not limited	
		Flooding	1.00				
6132:							
Platte, occasionally flooded----------	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Flooding	0.60
		Depth to saturated zone	0.39			Depth to saturated zone	0.39
6248:							
Ralton, very rarely flooded----------	90	Very limited		Not limited		Not limited	
		Flooding	1.00				
6625:							
Sarben----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
						Slope	0.00
6626:							
Sarben----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
						Slope	0.72
6722:							
Satanta----------	65	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Slope	0.72
						Dusty	0.50
Altvan----------	25	Not limited		Not limited		Somewhat limited	
						Slope	0.72
6725:							
Ascalon----------	45	Not limited		Not limited		Not limited	
Satanta, sandy substratum---------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Dusty	0.50

RECREATIONAL INTERPRETATIONS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6727:							
Satanta, sandy substratum	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Slope	0.00
Johnstown	18	Not limited		Not limited		Somewhat limited	
						Slope	0.00
Altvan	15	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Dusty	0.50
						Slope	0.00
6817:							
Scoville	95	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
6930:							
Sidney	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Slope	0.72
						Dusty	0.50
6937:							
Sidney	65	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
						Dusty	0.50
Canyon	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Dusty	0.50	Dusty	0.50	Slope	1.00
						Dusty	0.50
7120:							
Sulco, moderately eroded	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Slope	0.87
						Dusty	0.50
Mcconaughy, moderately eroded	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Dusty	0.50	Dusty	0.50	Slope	0.50
						Dusty	0.50
7121:							
Sulco, moderately eroded	65	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
						Dusty	0.50
Mcconaughy, moderately eroded	25	Somewhat limited		Somewhat limited		Very limited	
		Dusty	0.50	Dusty	0.50	Slope	1.00
						Dusty	0.50
7122:							
Sulco, moderately eroded	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Mcconaughy, moderately eroded	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
7582:							
Valent	90	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
						Slope	1.00
7586:							
Valent	95	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Too sandy	1.00
7588:							
Valent, rolling	50	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Too sandy	1.00
Valent, hilly	45	Very limited		Very limited		Very limited	
		Slope	1.00	Too sandy	1.00	Slope	1.00
		Too sandy	1.00	Slope	1.00	Too sandy	1.00
9985:							
Pits	100	Not rated		Not rated		Not rated	
9998:							
Water	100	Not rated		Not rated		Not rated	

RECREATIONAL INTERPRETATIONS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1130:					
Alliance	90	Somewhat limited		Not limited	
		Dusty	0.50		
1146:					
Alliance	65	Somewhat limited		Not limited	
		Dusty	0.50		
Rosebud	25	Not limited		Somewhat limited	
				Depth to bedrock	0.42
1198:					
Altvan	45	Not limited		Not limited	
Eckley	30	Not limited		Somewhat limited	
				Droughty	0.89
Satanta, sandy substratum	20	Somewhat limited		Not limited	
		Dusty	0.50		
1295:					
Ashollow	65	Somewhat limited		Somewhat limited	
		Dusty	0.50	Slope	0.84
Tassel	30	Somewhat limited		Very limited	
		Slope	0.50	Depth to bedrock	1.00
				Droughty	1.00
				Slope	1.00
1588:					
Blueridge	50	Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00
		Slope	0.18	Droughty	1.00
				Slope	1.00
				Gravel content	0.03
Altvan	35	Somewhat limited		Somewhat limited	
		Dusty	0.50	Slope	0.00
1782:					
Broadwater, frequently flooded	90	Somewhat limited		Very limited	
		Too sandy	0.91	Flooding	1.00
		Flooding	0.40	Droughty	1.00
1944:					
Calamus, very rarely flooded	95	Somewhat limited		Somewhat limited	
		Too sandy	0.91	Droughty	0.75
2072:					
Chappell	38	Not limited		Not limited	
Alice	33	Not limited		Not limited	
Broadwater	24	Somewhat limited		Very limited	
		Too sandy	0.91	Droughty	1.00
				Flooding	0.60
2630:					
Duroc	90	Not limited		Not limited	
2638:					
Duroc	90	Not limited		Not limited	
2639:					
Duroc	90	Not limited		Not limited	
3050:					
Glenberg, rarely flooded	90	Not limited		Not limited	
3140:					
Gothenburg, occasionally flooded	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Droughty	1.00
		Too sandy	0.91	Depth to saturated zone	1.00
				Flooding	0.60
3952:					
Jankosh	85	Not limited		Very limited	
				Sodium content	1.00
				Salinity	1.00
				Depth to saturated zone	0.03
4028:					
Jayem	90	Not limited		Not limited	
4070:					
Johnstown	35	Not limited		Not limited	
Satanta, sandy substratum	31	Somewhat limited		Not limited	
		Dusty	0.50		
Richfield	29	Somewhat limited		Not limited	
		Dusty	0.50		
4151:					
Keith	90	Somewhat limited		Not limited	
		Dusty	0.50		

RECREATIONAL INTERPRETATIONS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
4152:					
Keith	90	Somewhat limited		Not limited	
		Dusty	0.50		
4310:					
Kuma	95	Not limited		Not limited	
4311:					
Kuma	90	Not limited		Not limited	
4472:					
Las Animas, frequently flooded	95	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Depth to saturated zone	1.00
4475:					
Las Animas, occasionally flooded	92	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.03
4592:					
Lexsworth, very rarely flooded	85	Somewhat limited		Not limited	
		Dusty	0.50		
4655:					
Lodgepole, ponded	95	Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
5212:					
Merrick, very rarely flooded	90	Not limited		Not limited	
6132:					
Platte, occasionally flooded	90	Not limited		Somewhat limited	
				Flooding	0.60
				Depth to saturated zone	0.19
				Droughty	0.05
6248:					
Ralton, very rarely flooded	90	Not limited		Not limited	
6625:					
Sarben	90	Somewhat limited		Somewhat limited	
		Too sandy	0.79	Droughty	0.01
6626:					
Sarben	90	Somewhat limited		Somewhat limited	
		Too sandy	0.79	Droughty	0.01
6722:					
Satanta	65	Somewhat limited		Not limited	
		Dusty	0.50		
Altvan	25	Not limited		Not limited	
6725:					
Ascalon	45	Not limited		Not limited	
Satanta, sandy substratum	45	Somewhat limited		Not limited	
		Dusty	0.50		
6727:					
Satanta, sandy substratum	60	Somewhat limited		Not limited	
		Dusty	0.50		
Johnstown	18	Not limited		Not limited	
Altvan	15	Somewhat limited		Not limited	
		Dusty	0.50		
6817:					
Scoville	95	Somewhat limited		Somewhat limited	
		Too sandy	0.79	Droughty	0.61
6930:					
Sidney	85	Somewhat limited		Not limited	
		Dusty	0.50		
6937:					
Sidney	65	Somewhat limited		Not limited	
		Dusty	0.50		
Canyon	25	Somewhat limited		Very limited	
		Dusty	0.50	Depth to bedrock	1.00
				Droughty	1.00
7120:					
Sulco, moderately eroded	55	Somewhat limited		Not limited	

RECREATIONAL INTERPRETATIONS--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Dusty	0.50		
Mcconaughy, moderately eroded--	30	Somewhat limited		Not limited	
		Dusty	0.50		
7121:					
Sulco, moderately eroded----------	65	Somewhat limited		Not limited	
		Dusty	0.50		
Mcconaughy, moderately eroded--	25	Somewhat limited		Not limited	
		Dusty	0.50		
7122:					
Sulco, moderately eroded----------	70	Somewhat limited		Very limited	
		Dusty	0.50	Slope	1.00
		Slope	0.00		
Mcconaughy, moderately eroded--	20	Somewhat limited		Somewhat limited	
		Dusty	0.50	Slope	0.63
7582:					
Valent----------	90	Very limited		Somewhat limited	
		Too sandy	1.00	Droughty	0.89
7586:					
Valent----------	95	Very limited		Very limited	
		Too sandy	1.00	Slope	1.00
		Slope	0.08	Droughty	0.89
7588:					
Valent, rolling-----	50	Very limited		Very limited	
		Too sandy	1.00	Slope	1.00
		Slope	0.08	Droughty	0.89
Valent, hilly-------	45	Very limited		Very limited	
		Too sandy	1.00	Slope	1.00
		Slope	1.00	Droughty	0.89
9985:					
Pits----------	100	Not rated		Not rated	
9998:					
Water----------	100	Not rated		Not rated	

WILDLIFE INTERPRETATIONS
Deuel County, Nebraska

Use and Explanation of Wildlife Interpretations

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, water, and living space. If any one of these elements is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area. If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In the Wildlife Interpretations table, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

Suitability Ratings

The potential of the soil is rated good, fair, poor, or very poor.

Good - means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose.

Fair - means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderately intensive management is required for satisfactory results.

Poor - means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort.

Very Poor - means that limitations are very severe for the designated element or kind of wildlife habitat. Habitat is difficult to create, improve, or maintain in most places, and management is difficult and requires intensive effort.

Description of Wildlife Habitat Elements

Openland habitat consists of croplands, pastures, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kind of wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, red fox, and coyote.

Woodland habitat consists of hardwood or conifers, or a mixture of these and associated grasses, legumes and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, thrushes, woodpeckers, owl, tree squirrels, raccoon, and deer.

Wetland habitat consists of water-tolerant plants in open, marshy or swampy, shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, bitterns, rails, kingfishers, shorebirds, muskrat, mink, and beaver.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated good are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are fragrant sumac, chokecherry, American plum, sand plum, and gorden currant.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, saltgrass, cordgrass, rushes, sedges, and cattails.

WILDLIFE INTERPRETATIONS--Continued
Deuel County, Nebraska

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, red fox and coyote.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include antelope, deer, cottontail rabbit, prairie chicken, meadowlark, quail, and pheasant.

WILDLIFE INTERPRETATIONS
Deuel County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
1130: ALLIANCE--------	Good	Good	Good	Good	Good	Good	Very poor	Poor	Good	Good	Poor	Good
1146: ALLIANCE--------	Good	Good	Good	Good	Good	Good	Very poor	Poor	Good	Good	Poor	Good
ROSEBUD---------	Good	Good	Fair	---	Good	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
1198: ALTVAN----------	Fair	Good	Good	Good	Fair	Good	Very poor	Very poor	Good	Good	Very poor	Good
ECKLEY----------	Poor	Poor	Fair	---	---	Fair	Very poor	Very poor	Poor	---	Very poor	Fair
SATANTA---------	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1295: ASHOLLOW--------	Poor	Poor	Fair	Poor	Fair	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
TASSEL----------	Poor	Poor	Poor	Fair	Fair	Poor	Very poor	Very poor	Poor	Fair	Very poor	Poor
1588: BLUERIDGE-------	Poor	Poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor	Poor
ALTVAN----------	Poor	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Good	Good	Very poor	Good
1782: BROADWATER------	Poor	Fair	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
1944: CALAMUS---------	Poor	Good	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor	Fair
2072: CHAPPELL--------	Fair	Good	Good	---	Good	Good	Very poor	Very poor	Fair	---	Very poor	Good
ALICE-----------	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
BROADWATER------	Poor	Fair	Fair	---	---	Fair	Poor	Very poor	Fair	---	Very poor	Fair
2630: DUROC-----------	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
2638: DUROC-----------	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
2639: DUROC-----------	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
3050: GLENBERG--------	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
3140: GOTHENBURG------	Very poor	Very poor	Fair	Poor	Fair	Fair	Fair	Good	Poor	Poor	Fair	Fair
3952: JANKOSH---------	Poor	Poor	Very poor	Very poor	Very poor	Very poor	Very poor	Fair	Poor	Very poor	Poor	Very poor
4028: JAYEM-----------	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
4070: JOHNSTOWN-------	Good	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Fair	Very poor	Good

WILDLIFE INTERPRETATIONS--Continued
Deuel County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
SATANTA---------	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
RICHFIELD-------	Fair	Good	Fair	Poor	Fair	Poor	Very poor	Very poor	Fair	---	Very poor	Fair
4151: KEITH-----------	Good	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
4152: KEITH-----------	Good	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
4310: KUMA------------	Good	Good	Good	Fair	Good	Poor	Poor	Very poor	Fair	---	Very poor	Poor
4311: KUMA------------	Good	Good	Fair	Fair	Good	Poor	Poor	Very poor	Fair	---	Very poor	Poor
4472: LAS ANIMAS------	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
4475: LAS ANIMAS------	Very poor	Poor	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
4592: LEXSWORTH-------	Fair	Fair	Good	Good	Good	Good	Poor	Poor	Fair	Good	Poor	Good
4655: LODGEPOLE-------	Poor	Fair	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good	Poor
5212: MERRICK---------	Good	Good	Good	Good	Good	Good	Poor	Poor	Poor	Good	Poor	Good
6132: PLATTE----------	Fair	Good	Fair	Poor	Fair	Good	Fair	Good	Fair	Poor	Good	Fair
6248: RALTON----------	Good	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor	Good
6625: SARBEN----------	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
6626: SARBEN----------	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
6722: SATANTA---------	Fair	Good	Fair	Poor	Fair	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
ALTVAN----------	Fair	Good	Good	Good	Fair	Good	Very poor	Very poor	Good	Good	Very poor	Good
6725: ASCALON---------	Good	Good	Fair	Poor	Fair	Fair	Poor	Very poor	Good	---	Very poor	Fair
SATANTA---------	Good	Good	Fair	Poor	Fair	Fair	Poor	Very poor	Good	Good	Very poor	Fair
6727: SATANTA---------	Good	Good	Fair	Poor	Fair	Fair	Poor	Very poor	Good	Good	Very poor	Fair
JOHNSTOWN-------	Good	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Fair	Very poor	Good
ALTVAN----------	Fair	Good	Good	Good	Fair	Good	Very poor	Very poor	Good	Good	Very poor	Good
6817: SCOVILLE--------	Poor	Fair	Fair	Poor	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Very poor

WILDLIFE INTERPRETATIONS--Continued
Deuel County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hard-wood trees	Conif-erous plants	Shrubs	Wetland plants	Shallow water areas	Open-land wild-life	Wood-land wild-life	Wetland wild-life	Range-land wild-life
6930: SIDNEY----------	Fair	Good	Good	Fair	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
6937: SIDNEY----------	Fair	Good	Good	Fair	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
CANYON----------	Poor	Poor	Fair	Poor	Poor	Poor	Very poor	Very poor	Poor	Fair	Very poor	Fair
7120: SULCO----------	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
MCCONAUGHY------	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7121: SULCO----------	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
MCCONAUGHY------	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7122: SULCO----------	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
MCCONAUGHY------	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7582: VALENT----------	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
7586: VALENT----------	Poor	Poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
7588: VALENT----------	Poor	Poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
VALENT----------	Very poor	Very poor	Poor	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor	Fair
9975: ----------	---	---	---	---	---	---	---	---	---	---	---	---
9985: PITS----------	---	---	---	---	---	---	---	---	---	---	---	---
9998: WATER----------	---	---	---	---	---	---	---	---	---	---	---	---

YIELDS PER ACRE OF PASTURE AND HAYLAND
Deuel County, Nebraska

Use and Explanation of Pastureland and Hayland Interpretations

This subsection provides information concerning the suitability of soils for the production of pasture and hayland. This subsection may contain pasture and hayland suitability groupings, land capability and yield estimates, yield estimates for individual grasses or legumes, or other information pertaining to the production of forage.

Pasture and Hayland Suitability Groupings

Soils are placed in pasture and hayland groups according to their suitability for the production of forage. The soils in each group are enough alike to be suited to the same grasses or legumes, to have similar limitations and hazards, to require similar management, and to have similar productivity and other responses to management. Thus, the pasture and hayland suitability group is a convenient way of grouping the soils for their management. If used, these groupings are identified and described in other reports in the subsection.

Yield Estimates

The average yields per acre that can be expected of the principal pasture or hayland crops, under a high level of management, are presented in this subsection. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall or other climatic factors. The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation are also important management practices.

The Pasture and Hayland table show yield estimates in tons per acre and animal unit months for pasture and hayland groups. An animal unit month is the amount of forage required by one animal unit (AU) for 30 days. On animal unit (AU) is one (1000 pound) mature cow and a calf up to weaning age (usually six months of age) or their equivalent. The Natural Resources Conservation Service uses 900 pounds of air dry forage as the amount needed to meet this requirement. To maintain a healthy and vigorous plant community, the degree of use should never be greater than 50 percent. Therefore only 25 percent of the total biomass grown is considered consumed by the grazing animal. Animal Unit Months can be converted to air dry pounds per acre production by multiplying the AUM by 30 days, then by 30 pounds per day, and then by four. This figure is the amount of total forage production.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil in the Nontechnical Description section. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued
Deuel County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
1130:				
Alliance	2c	1	---	5.80
1146:				
Alliance	2e	2e	---	5.50
Rosebud	3e	3e	---	4.70
1198:				
Altvan	4e	4e	---	3.50
Eckley	6e	---	---	2.50
Satanta, sandy substratum	4e	4e	---	4.50
1295:				
Ashollow	6e	---	---	---
Tassel	6s	---	---	---
1588:				
Blueridge	6s	---	---	---
Altvan	6e	---	---	---
1782:				
Broadwater, frequently flooded	6w	---	---	---
1944:				
Calamus, very rarely flooded	6s	4s	---	3.80
2072:				
Chappell	3e	2e	---	4.50
Alice	3e	2e	5.00	5.00
Broadwater	6w	---	2.50	---
2630:				
Duroc	2c	1	---	6.00
2638:				
Duroc	2c	1	---	6.00
2639:				
Duroc	2e	2e	---	5.50
3050:				
Glenberg, rarely flooded	3e	2e	---	4.50
3140:				
Gothenburg, occasionally flooded	7s	---	---	---
3952:				
Jankosh	6s	4s	---	2.50
4028:				
Jayem	3e	2e	---	4.80
4070:				
Johnstown	2c	1	---	5.60
Satanta, sandy substratum	2c	1	---	5.60
Richfield	2c	1	---	5.00
4151:				
Keith	2e	2e	---	5.60
4152:				
Keith	3e	3e	---	5.00
4310:				
Kuma	2c	1	---	6.00
4311:				
Kuma	2e	2e	---	5.80

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued
Deuel County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
4472: Las Animas, frequently flooded	5w	---	---	---
4475: Las Animas, occasionally flooded	2w	2w	---	5.50
4592: Lexsworth, very rarely flooded	3w	3w	---	5.00
4655: Lodgepole, ponded	3w	4w	3.00	---
5212: Merrick, very rarely flooded	2c	1	---	6.00
6132: Platte, occasionally flooded	6w	4w	---	3.60
6248: Ralton, very rarely flooded	2c	1	---	5.60
6625: Sarben	4e	3e	---	3.80
6626: Sarben	4e	4e	---	3.80
6722: Satanta	3e	3e	---	4.50
Altvan	4e	4e	---	4.00
6725: Ascalon	3e	2e	---	5.00
Satanta, sandy substratum	3e	2e	---	5.40
6727: Satanta, sandy substratum	2e	2e	---	5.60
Johnstown	2e	2e	---	6.00
Altvan	3e	2s	---	4.20
6817: Scoville	4e	4e	---	3.60
6930: Sidney	3e	3e	---	4.60
6937: Sidney	4e	4e	---	3.20
Canyon	6s	---	---	1.50
7120: Sulco, moderately eroded	4e	3e	---	4.40
Mcconaughy, moderately eroded	4e	3e	---	4.80
7121: Sulco, moderately eroded	4e	4e	---	3.50
Mcconaughy, moderately eroded	4e	4e	---	3.80
7122: Sulco, moderately eroded	6e	---	---	---
Mcconaughy, moderately eroded	6e	---	---	---

YIELDS PER ACRE OF PASTURE AND HAYLAND--Continued
Deuel County, Nebraska

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
7582:				
Valent	6e	4e	---	3.00
7586:				
Valent	6e	---	---	---
7588:				
Valent, rolling	6e	---	---	---
Valent, hilly	7e	---	---	---
9975:	---	---	---	---
9985:				
Pits	8s	---	---	---
9998:				
Water	---	---	---	---

CONSERVATION TREE AND SHRUB MANAGEMENT
Deuel County, Nebraska

A Conservation Tree/Shrub Suitability Group (CTSG), formerly Windbreak Suitability Group, is a physiographic unit or area having similar climatic and edaphic characteristics that control the selection and height growth of trees and shrubs.

In this table, the Conservation Tree and Shrub Grouping is expressed as a group index number. The group index for Conservation Tree and Shrub groups (CTSG) are a guide for species best suited for different kinds of soil and for prediction height, growth, and effectiveness. The groupings can be used when selection woody plants for windbreaks, wildlife plantings riparian buffers, reforestation, other environmental plantings, recreation, landscaping, wetland restoration or enhancement and critical area plantings. CTSG's are developed to assure satisfactory species selection and adaptation to specific conditions of soil, climate and physiography. CTSG's are a guide for selection species best suited for different kinds of soil and prediction height growth and effectiveness.

All soil series mapped in the state have been placed in 10 groups of similar soil characteristics. Groups 1, 2, 3, 4, 6, and 9 are further divided into subgroups. In addition, all groups provide information by Major Land Resource Areas.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters a tree or shrub may be well or poorly suited because of soil characteristics. Each tree or shrub also has definable potentials of height growth depending on the factors just mentioned. Accurate definitions of potential heights are necessary for proper windbreak planning and design.

Windbreaks protect livestock, buildings, roads and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low-growing and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not grow trees originally. Knowledge of how trees perform on such land can be gained only by observing and recording their performance where trees have been planted and survived. The problem is compounded by the fact that many favorite windbreak species are not indigenous to the areas in which they are planted.

The Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups shows the adapted species listing for each group index number. Showing the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates are based on measurements and observation of established plantings that have been given adequate care. This information should be used to determine the placement of a windbreak, the area protected and the arrangement of species.

A number of attributes are included in the CTSG species tables for each group number found in this section of the Field Office Technical Guide. These attributes were rated subjectively and assigned a relative value to further assist those unfamiliar with individual species characteristics or desirability for the intended use. Definitions and explanations can be found. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery. See part 537 of the National Forestry Manual for additional information.

In the Tree and Shrub Management table interpretive ratings are given for various aspects of forest and conservation tree and shrub management. Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. Well suited indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. Moderately well suited indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable and fair performance can be expected. Some maintenance is needed. Poorly suited indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. Unsuited indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

The paragraphs that follow indicate the soil properties considered in rating the soils for forest and conservation tree and shrub management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet. Also, in the Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups.

Ratings in the columns suitability for hand planting and suitability for mechanical planting are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately well suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column suitability for mechanical site preparation (surface) are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1-foot is considered in the ratings.

Ratings in the column suitability for mechanical site preparation (deep) are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column potential for seedling mortality are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality. See the National Forestry Manual, Subpart B for criteria used in rating management concerns. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

CONSERVATION TREE AND SHRUB MANAGEMENT
Deuel County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
1130:						
Alliance	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
1146:						
Alliance	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Rosebud	6	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
1198:						
Altvan	3	Moderately suited Stickiness	Moderately suited Slope Stickiness	Well suited	Well suited	Low
Eckley	10	Well suited	Moderately suited Slope Rock fragments	Well suited	Well suited	Low
Satanta, sandy substratum	3	Well suited	Moderately suited Slope	Well suited	Well suited	Low
1295:						
Ashollow	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
Tassel	10	Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
1588:						
Blueridge	10	Moderately suited Sandiness	Poorly suited Slope Sandiness	Poorly suited Slope	Poorly suited Slope	Low
Altvan	10	Well suited	Moderately suited Slope	Well suited	Well suited	Low
1782:						
Broadwater, frequently flooded	10	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
1944:						
Calamus, very rarely flooded	7	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
2072:						
Chappell	6G	Well suited	Well suited	Well suited	Well suited	Low
Alice	5	Well suited	Well suited	Well suited	Well suited	Low
Broadwater	10	Moderately suited Sandiness	Moderately suited Sandiness	Well suited	Well suited	Low
2630:						
Duroc	3	Well suited	Well suited	Well suited	Well suited	Low
2638:						
Duroc	3	Well suited	Well suited	Well suited	Well suited	Low
2639:						
Duroc	3	Well suited	Well suited	Well suited	Well suited	Low
3050:						
Glenberg, rarely flooded	1	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
3140:						
Gothenburg, occasionally flooded	10	Unsuited Wetness Sandiness	Moderately suited Wetness Sandiness	Unsuited Wetness	Unsuited Wetness	High Wetness
3952:						
Jankosh	10	Well suited	Well suited	Well suited	Well suited	High Salinity Soil reaction
4028:						
Jayem	5	Well suited	Well suited	Well suited	Well suited	Low
4070:						
Johnstown	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Satanta, sandy substratum	3	Moderately suited	Moderately suited	Well suited	Well suited	Low

CONSERVATION TREE AND SHRUB MANAGEMENT
Deuel County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
Richfield	3	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	Low
4151: Keith	3	Well suited	Well suited	Well suited	Well suited	Low
4152: Keith	3	Well suited	Well suited	Well suited	Well suited	Low
4310: Kuma	3	Well suited	Well suited	Well suited	Well suited	Low
4311: Kuma	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
4472: Las Animas, frequently flooded-	10	Unsuited Wetness	Moderately suited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness Soil reaction
4475: Las Animas, occasionally flooded	2	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
4592: Lexsworth, very rarely flooded	6G	Well suited	Well suited	Well suited	Well suited	Moderate Salinity Soil reaction
4655: Lodgepole, ponded	2	Poorly suited Stickiness	Poorly suited Stickiness	Poorly suited Stickiness	Well suited	High Wetness
5212: Merrick, very rarely flooded	1	Well suited	Well suited	Well suited	Well suited	Low
6132: Platte, occasionally flooded	2	Well suited	Well suited	Well suited	Well suited	Low
6248: Ralton, very rarely flooded	1	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
6625: Sarben	5	Well suited	Well suited	Well suited	Well suited	Low
6626: Sarben	5	Well suited	Well suited	Well suited	Well suited	Low
6722: Satanta	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Altvan	6G	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
6725: Ascalon	5	Well suited	Well suited	Well suited	Well suited	Low
Satanta, sandy substratum	5	Well suited	Well suited	Well suited	Well suited	Low
6727: Satanta, sandy substratum	3	Well suited	Well suited	Well suited	Well suited	Low
Johnstown	3	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
Altvan	6G	Moderately suited Stickiness	Moderately suited Stickiness	Well suited	Well suited	Low
6817: Scoville	5	Well suited	Well suited	Well suited	Well suited	High Available water
6930: Sidney	3	Well suited	Well suited	Well suited	Well suited	Low
6937: Sidney	3	Well suited	Moderately suited Slope	Well suited	Well suited	Low
Canyon	10	Moderately suited Rock fragments	Poorly suited Rock fragments Slope	Poorly suited Rock fragments	Well suited	Moderate Soil reaction

CONSERVATION TREE AND SHRUB MANAGEMENT
Deuel County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
7120:						
Sulco, moderately eroded	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
Mcconaughy, moderately eroded	3	Well suited	Well suited	Well suited	Well suited	Low
7121:						
Sulco, moderately eroded	8	Well suited	Moderately suited Slope	Well suited	Well suited	Moderate Soil reaction
Mcconaughy, moderately eroded	3	Well suited	Moderately suited Slope	Well suited	Well suited	Low
7122:						
Sulco, moderately eroded	8	Well suited	Moderately suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Mcconaughy, moderately eroded	3	Well suited	Moderately suited Slope	Well suited	Well suited	Low
7582:						
Valent	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
7586:						
Valent	7	Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
7588:						
Valent, rolling	7	Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
Valent, hilly	10	Moderately suited Slope	Unsuited Slope	Unsuited Slope	Unsuited Slope	Low
9985:						
Pits	10	Not rated	Not rated	Not rated	Not rated	Not rated
9998:						
Water		Not rated	Not rated	Not rated	Not rated	Not rated

ENGINEERING INDEX PROPERTIES
Deuel County, Nebraska

Engineering Index Properties table gives the engineering classifications and the range of index properties for the layers of each soil in the survey area. Depth to the upper and lower boundaries of each layer is indicated. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998). The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in Engineering Index Properties table.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

ENGINEERING INDEX PROPERTIES--Continued
Deuel County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1130:												
Alliance-------	0-6	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	6-17	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	17-24	Loam	ML	A-4	0	0	100	100	85-95	60-75	30-40	NP-15
	24-34	Loam	ML	A-4	0	0	100	100	85-95	60-75	30-40	NP-15
	34-47	Very fine sandy loam	ML	A-4	0	0	100	100	70-100	50-65	20-30	NP-10
	47-54	Loamy fine sand	SP-SM	A-2	0	0	100	100	50-70	5-15	0-0	NP
	54-80	Weathered bedrock			---	---	---	---	---	---	0-0	---
1146:												
Alliance-------	0-6	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	6-14	Clay loam	CL	A-7, A-6	0	0	100	100	90-100	70-80	35-45	15-25
	14-19	Clay loam	CL	A-7, A-6	0	0	100	100	90-100	70-80	35-45	15-25
	19-25	Loam	ML	A-4	0	0	100	100	85-95	60-75	30-40	NP-15
	25-45	Very fine sandy loam	ML	A-4	0	0	100	100	70-100	50-65	20-30	NP-10
	45-60	Weathered bedrock			---	---	---	---	---	---	0-0	---
Rosebud--------	0-6	Loam	CL	A-4, A-6	0	0	100	100	85-95	65-75	30-40	5-15
	6-11	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	11-17	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	17-23	Loam	ML	A-4	0	0	100	100	85-95	60-75	30-40	NP-15
	23-30	Very fine sandy loam	ML	A-4	0	0	100	100	70-100	50-65	20-30	NP-10
	30-80	Weathered bedrock			---	---	---	---	---	---	0-0	---
1198:												
Altvan---------	0-7	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	7-12	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	12-17	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	35-45	15-25
	17-25	Very fine sandy loam	ML	A-4	0	0	100	100	70-100	50-65	20-30	NP-10
	25-31	Loamy fine sand	SC	A-2, A-4	0	0	100	100	65-80	20-45	15-25	NP-10
	31-80	Gravelly coarse sand	SP-SC	A-1	0	0	70-100	50-95	25-65	0-15	0-0	NP
Eckley---------	0-5	Sandy loam	SC, SC-SM, SM	A-1, A-2, A-4	0	0	100	100	60-70	30-40	15-30	NP-10
	5-8	Sandy clay loam	SC	A-6	0	0	100	100	80-90	35-45	30-40	10-20
	8-11	Gravelly sandy loam	SC	A-2, A-6	0	0	70-100	50-95	60-70	30-40	15-30	NP-10
	11-15	Gravelly coarse sand	SP-SC	A-1	0	0	70-100	50-95	25-65	0-15	0-0	NP
	15-80	Gravelly coarse sand	SP-SC	A-1	0	0	70-100	50-95	25-65	0-15	0-0	NP
Satanta, sandy substratum----	0-10	Loam	CL	A-6, A-4	0	0	100	100	85-95	60-75	30-40	5-15
	10-21	Loam	ML	A-4	0	0	100	100	85-95	60-75	30-40	NP-15
	21-30	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	30-37	Very fine sandy loam	ML	A-6, A-4	0	0	100	100	85-95	50-65	20-30	NP-10
	37-42	Very fine sandy loam	ML	A-4	0	0	100	100	70-100	50-65	20-30	NP-10
	42-50	Loamy fine sand	SP-SM	A-2	0	0	100	100	50-70	5-15	0-0	NP
	50-80	Fine sand	SP-SM	A-2	0	0	100	100	50-70	5-15	0-0	NP
1295:												
Ashollow-------	0-3	Very fine sandy loam	ML	A-1-b, A-2, A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	3-10	Very fine sandy loam	ML	A-1-b, A-2, A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	10-32	Very fine sandy loam	ML	A-1-b, A-2, A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	32-60	Very fine sandy loam	ML	A-1-b, A-2, A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
Tassel---------	0-4	Fine sandy loam	SC	A-4	0	0	100	100	70-85	40-55	0-0	NP-10
	4-7	Fine sandy loam	SC	A-4	0	0	100	100	70-85	40-55	0-0	NP-10
	7-18	Gravelly fine sandy loam	SC	A-1, A-2	0	0-5	100	50-95	60-70	30-40	0-0	NP-10
	18-60	Weathered bedrock			---	---	---	---	---	---	0-0	---
1588:												
Blueridge------	0-4	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	100	50-95	25-65	0-15	0-0	NP
	4-40	Gravelly coarse sand	SP	A-1, A-2, A-3	0	0-5	70-100	50-95	25-60	0-15	0-0	NP
	40-80	Gravelly coarse sand	SP	A-1, A-2, A-3	0	0-5	70-100	50-95	25-60	0-15	0-0	NP
Altvan---------	0-7	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	7-10	Sandy clay loam	SC	A-6	0	0	100	100	80-90	35-45	30-40	10-20
	10-20	Sandy clay loam	SC	A-6	0	0	100	100	80-90	35-45	30-40	10-20
	20-24	Very fine sandy loam	ML	A-4	0	0	100	100	70-100	50-65	20-30	NP-10
	24-30	Loamy fine sand	SC	A-2, A-4	0	0	100	100	65-80	20-45	15-25	NP-10
	30-80	Gravelly sand	SP-SC	A-1, A-2-4, A-3	0	0	75-90	50-90	25-35	0-10	0-0	NP

ENGINEERING INDEX PROPERTIES--Continued
Deuel County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1782:												
Broadwater, frequently flooded-------	0-3	Loamy sand	SC	A-1-b, A-2, A-4	0	0	100	100	50-75	15-30	15-25	NP-10
	3-9	Loamy sand	SC	A-2, A-4, A-1-b	0	0	100	100	50-75	15-30	15-25	NP-10
	9-32	Gravelly coarse sand	SP	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-15	0-0	NP
	32-60	Gravelly coarse sand	SP	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-15	0-0	NP
1944:												
Calamus, very rarely flooded	0-7	Loamy sand	SM	A-2, A-3	0	0	100	90-100	50-75	15-30	15-25	NP-5
	7-14	Sand	SP-SM	A-3	0	0	100	90-100	50-70	5-15	0-0	NP
	14-22	Sand	SP-SM	A-3	0	0	100	90-100	50-70	5-15	0-0	NP
	22-38	Sand	SP-SM	A-3	0	0	100	90-100	65-80	5-15	0-0	NP
	38-58	Stratified gravelly coarse sand to coarse sand	SP-SC	A-1, A-2, A-3	0	0	70-100	50-90	25-65	0-15	0-0	NP
	58-60	Stratified gravelly coarse sand to coarse sand	SP-SC	A-1, A-2, A-3	0	0	70-100	50-90	25-65	0-15	0-0	NP
2072:												
Chappell-------	0-7	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	7-17	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	17-25	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	25-30	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	30-60	Gravelly coarse sand	SP-SC	A-1	0	0-5	70-85	50-90	25-65	0-15	0-0	NP
Alice----------	0-8	Sandy loam	SC, SC-SM, SM	A-4	0	0	100	100	60-70	30-40	15-30	NP-10
	8-14	Sandy loam	SC, SC-SM, SM	A-4	0	0	100	100	60-70	30-40	15-30	NP-10
	14-19	Sandy loam	SC, SC-SM, SM	A-4	0	0	100	100	60-70	30-40	15-30	NP-10
	19-33	Sandy loam	SC, SC-SM, SM	A-4	0	0	100	100	60-70	30-40	15-30	NP-10
	33-80	Sandy loam	SC, SC-SM, SM	A-4	0	0	100	100	60-70	30-40	15-30	NP-10
Broadwater-----	0-3	Loamy sand	SC	A-1-b, A-2, A-4	0	0	100	100	50-75	15-30	15-25	NP-10
	3-9	Loamy sand	SC	A-2, A-4, A-1-b	0	0	100	100	50-75	15-30	15-25	NP-10
	9-32	Gravelly coarse sand	SP	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-15	0-0	NP
	32-60	Gravelly coarse sand	SP	A-1, A-2, A-3	0	0	70-100	50-95	25-60	0-15	0-0	NP
2630:												
Duroc----------	0-6	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	6-14	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	14-27	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	27-32	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	32-42	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	42-60	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
2638:												
Duroc----------	0-12	Loam	CL	A-6, A-4	0	0	100	100	85-95	60-75	30-40	5-15
	12-24	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	24-31	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	31-37	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	37-46	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	46-60	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
2639:												
Duroc----------	0-12	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	12-24	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	24-31	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	31-37	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	37-46	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	46-60	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
3050:												
Glenberg, rarel flooded-------	0-8	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	8-60	Stratified loamy fine sand to fine sandy loam to very fine sandy loam	SC	A-2, A-4	0	0	100	100	65-95	20-65	15-30	NP-10
3140:												
Gothenburg, occasionally flooded-------	0-5	Loamy sand	SM	A-2	0	0	100	90-100	50-70	15-30	15-25	NP
	5-14	Sand	SP-SM	A-3	0	0	100	90-100	50-70	5-15	0-0	NP
	14-60	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	70-100	50-95	25-65	0-15	0-0	NP

ENGINEERING INDEX PROPERTIES--Continued
Deuel County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
3952:												
Jankosh--------	0-2	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	2-4	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	4-14	Sandy clay loam	SC	A-6	0	0	100	100	80-90	35-45	30-40	10-20
	14-18	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	18-33	Very fine sandy loam	ML	A-4	0	0	100	100	85-95	50-65	20-30	NP-10
	33-60	Gravelly coarse sand	SP	A-2, A-1, A-3	0	0	70-100	50-95	25-65	0-15	0-0	NP
4028:												
Jayem----------	0-6	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	6-9	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	9-22	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	22-50	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	50-60	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
4070:												
Johnstown------	0-9	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	9-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	15-35
	25-29	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	15-35
	29-35	Loam	CL	A-6, A-7	0	0	100	100	85-100	60-75	30-40	10-20
	35-46	Very fine sandy loam	ML	A-4	0	0	100	100	70-100	50-65	20-30	NP-10
	46-60	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	70-100	50-95	25-65	0-15	0-0	NP
Satanta, sandy substratum----	0-8	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	8-25	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	25-32	Loam	CL	A-6, A-7	0	0	100	100	85-100	60-75	30-40	10-20
	32-52	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	52-60	Sand	SP-SM	A-3	0	0	100	100	50-70	5-15	0-0	NP
Richfield------	0-7	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	7-12	Silty clay	CH	A-7	0	0	100	100	95-100	90-95	50-70	25-40
	12-17	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	35-50	15-35
	17-21	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	25-35	5-15
	21-32	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	25-35	5-15
	32-42	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	25-35	5-15
	42-48	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	48-78	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	60-70	30-40	15-30	NP-10
	78-80	Gravelly coarse sand	SP-SC	A-1, A-2-4, A-3	0	0	70-100	50-90	25-65	0-15	0-0	NP
4151:												
Keith----------	0-6	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	6-13	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	13-22	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	5-15
	22-31	Silt loam	CL, CL-ML, ML	A-6, A-7	0	0	100	100	90-100	70-90	25-35	5-15
	31-48	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	70-90	25-35	5-15
	48-60	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
4152:												
Keith----------	0-7	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	7-14	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	5-15
	14-19	Silt loam	CL, CL-ML, ML	A-6, A-7	0	0	100	100	90-100	70-90	25-35	5-15
	19-25	Loam	ML	A-4	0	0	100	100	85-95	60-75	30-40	NP-15
	25-60	Loam	ML	A-4	0	0	100	100	85-95	60-75	30-40	NP-15
4310:												
Kuma-----------	0-7	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	7-17	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	17-24	Loam	CL	A-6, A-7	0	0	100	100	85-95	60-75	30-40	5-15
	24-37	Loam	CL	A-6, A-7	0	0	100	100	85-95	60-75	30-40	5-15
	37-44	Loam	CL	A-6, A-7	0	0	100	100	85-95	60-75	30-40	5-15
	44-60	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
4311:												
Kuma-----------	0-6	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	6-10	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	15-35
	10-23	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	15-35
	23-33	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	85-95	35-50	15-35
	33-41	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	90-100	70-90	25-35	5-15
	41-60	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
4472:												
Las Animas, frequently flooded-------	0-5	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	5-11	Fine sandy loam	SC-SM	A-2, A-4	0	0	100	100	70-85	40-55	20-30	NP-10
	11-33	Stratified sandy loam to fine sandy loam	SC	A-4, A-2	0	0	100	100	70-85	40-55	15-30	NP-10
	33-60	Stratified loamy fine sand to very fine sandy loam	SC	A-4, A-2	0	0	100	100	65-95	20-65	15-30	NP-10

ENGINEERING INDEX PROPERTIES--Continued
Deuel County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
4475:												
Las Animas, occasionally flooded-------	0-5	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	5-11	Fine sandy loam	SC-SM	A-2, A-4	0	0	100	100	70-85	40-55	20-30	NP-10
	11-33	Stratified sandy loam to fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	33-60	Stratified loamy fine sand to very fine sandy loam	SC	A-2, A-4	0	0	100	100	65-95	20-65	15-30	NP-10
4592:												
Lexsworth, very rarely flooded	0-12	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	12-19	Sandy clay loam	SC	A-6	0	0	100	100	80-90	35-45	30-40	10-20
	19-26	Coarse sandy loam	SC	A-2, A-4	0	0	100	90-100	60-70	40-55	15-30	NP-10
	26-33	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	95-100	75-95	25-65	3-15	0-0	NP
	33-52	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	95-100	75-95	25-65	3-15	0-0	NP
	52-60	Fine sand	SP-SC	A-1, A-2, A-3	0	0	95-100	90-100	65-80	3-15	0-0	NP
	60-80	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	85-100	75-95	25-65	3-15	0-0	NP
4655:												
Lodgepole, ponded--------	0-5	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	90-100	70-90	25-35	5-15
	5-14	Silty clay	CH	A-7	0	0	100	100	95-100	90-95	50-70	25-40
	14-26	Silty clay	CH	A-7	0	0	100	100	95-100	90-95	50-70	25-40
	26-32	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	35-50	15-25
	32-48	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	48-60	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
5212:												
Merrick, very rarely flooded	0-12	Sandy clay loam	SC	A-6	0	0	100	100	85-100	60-75	30-40	10-20
	12-27	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	70-80	20-40	10-20
	27-38	Clay loam	CL	A-6	0	0	100	100	90-100	70-80	30-40	10-20
	38-42	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	42-53	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	53-64	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	64-80	Very fine sandy loam	ML	A-6, A-4	0	0	100	100	85-95	50-65	20-30	NP-10
6132:												
Platte, occasionally flooded-------	0-5	Loam	CL	A-4, A-6	0	0	100	95-100	85-95	60-70	30-40	5-15
	5-11	Fine sandy loam	ML	A-4	0	0	100	95-100	70-95	60-75	15-20	NP-10
	11-18	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	100	95-100	70-95	60-75	15-20	NP-10
	18-60	Gravelly coarse sand	SP	A-1, A-2, A-3	0	0	70-100	50-95	25-65	0-15	0-0	NP
6248:												
Ralton, very rarely flooded	0-6	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	6-14	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	14-24	Stratified very fine sandy loam to loam	ML	A-4	0	0	100	100	85-95	50-75	15-35	NP-10
	24-34	Very fine sandy loam	ML	A-4	0	0	100	100	85-95	60-75	20-30	NP-10
	34-51	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	51-71	Very fine sandy loam	ML	A-4	0	0	100	100	85-95	50-65	20-30	NP-10
	71-80	Gravelly loamy coarse sand	SP-SC	A-1	0	0	70-100	50-90	25-65	0-15	0-0	NP
6625:												
Sarben---------	0-7	Loamy fine sand	SC	A-2	0	0	100	100	65-80	20-35	15-25	NP-10
	7-15	Fine sandy loam	SC-SM	A-4	0	0	100	100	70-85	40-55	20-30	NP-10
	15-32	Fine sandy loam	SC-SM	A-4	0	0	100	100	70-85	40-55	20-30	NP-10
	32-60	Fine sandy loam	SC-SM	A-4	0	0	100	100	70-85	40-55	20-30	NP-10
6626:												
Sarben---------	0-7	Loamy fine sand	SC	A-2	0	0	100	100	65-80	20-35	15-25	NP-10
	7-15	Fine sandy loam	SC-SM	A-4	0	0	100	100	70-85	40-55	20-30	NP-10
	15-32	Fine sandy loam	SC-SM	A-4	0	0	100	100	70-85	40-55	20-30	NP-10
	32-60	Fine sandy loam	SC-SM	A-4	0	0	100	100	70-85	40-55	20-30	NP-10

ENGINEERING INDEX PROPERTIES--Continued
Deuel County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
6722:												
Satanta--------	0-6	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	6-13	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	13-19	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	19-26	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	26-52	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	52-76	Loamy fine sand	SC	A-2, A-3	0	0	100	100	65-80	20-35	15-25	NP-10
Altvan---------	0-5	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	5-10	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	35-45	15-25
	10-14	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	35-45	15-25
	14-24	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	24-38	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	38-80	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	70-100	50-95	25-65	0-15	0-0	NP
6725:												
Satanta, sandy substratum----	0-9	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	9-14	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	14-26	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	26-31	Loam	CL	A-6, A-7	0	0	100	100	85-100	60-75	30-40	10-20
	31-55	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	55-80	Sand	SP-SM	A-3	0	0	100	100	50-70	5-15	0-0	NP
Ascalon--------	0-6	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	6-19	Sandy clay loam	SC	A-6	0	0	100	100	80-90	35-45	30-40	10-20
	19-35	Fine sandy loam	SC	A-4, A-6	0	0	100	100	70-85	40-55	15-30	NP-10
	35-40	Fine sandy loam	SC	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	40-46	Loamy fine sand	SC	A-2, A-4	0	0	100	100	65-80	20-45	15-25	NP-10
	46-80	Stratified coarse sand to sand to loamy fine sand	SC	A-2, A-4	0	0	70-100	50-100	25-80	20-35	0-25	NP-10
6727:												
Satanta, sandy substratum----	0-9	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	9-14	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	14-26	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-45	15-25
	26-31	Loam	CL	A-6, A-7	0	0	100	100	85-100	60-75	30-40	10-20
	31-55	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	55-80	Sand	SP-SM	A-3	0	0	100	100	50-70	5-15	0-0	NP
Johnstown------	0-6	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	30-40	5-15
	6-23	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-50	15-25
	23-36	Clay loam	CL	A-6, A-7	0	0	100	100	90-100	70-80	35-50	15-25
	36-42	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	42-58	Very fine sandy loam	ML	A-4, A-6	0	0	100	100	85-95	50-65	20-30	NP-10
	58-80	Sand	SP-SM	A-3	0	0	100	100	50-70	5-15	0-0	NP
Altvan---------	0-5	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	5-10	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	35-45	15-25
	10-17	Clay loam	CL	A-4, A-6	0	0	100	100	90-100	60-80	35-45	15-25
	17-24	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	24-30	Loam	CL	A-4	0	0	100	100	85-95	60-75	30-40	5-15
	30-80	Coarse sand	SP-SC	A-1, A-2, A-3	0	0	85-100	75-95	25-65	3-15	0-0	NP
6817:												
Scoville-------	0-6	Loamy fine sand	SC	A-2	0	0	100	100	65-80	20-35	15-25	NP-10
	6-10	Loamy fine sand	SC	A-2, A-3	0	0	100	100	65-80	20-35	15-25	NP-10
	10-42	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
	42-46	Very fine sandy loam	ML	A-4	0	0	100	100	85-95	40-65	20-30	NP-10
	46-60	Loamy fine sand	SC	A-2, A-3	0	0	100	100	65-80	20-35	15-25	NP-10
6930:												
Sidney---------	0-11	Loam	CL	A-4, A-6	0	0	95-100	90-100	85-95	60-75	30-40	5-15
	11-17	Loam	CL	A-4, A-6	0	0	95-100	85-100	85-95	60-75	30-40	5-15
	17-29	Very fine sandy loam	ML	A-4, A-6	0	0	95-100	80-100	85-95	50-65	20-30	NP-10
	29-48	Very fine sandy loam	ML	A-4, A-6	0	0	95-100	80-100	85-95	50-60	20-30	NP-10
	48-60	Weathered bedrock			---	---	---	---	---	---	0-0	---
6937:												
Sidney---------	0-11	Loam	CL	A-6, A-4	0	0	95-100	90-100	85-95	60-75	30-40	5-15
	11-17	Loam	CL	A-4, A-6	0	0	95-100	85-100	85-95	60-75	30-40	5-15
	17-29	Very fine sandy loam	ML	A-4, A-6	0	0	95-100	80-100	85-95	50-65	20-30	NP-10
	29-48	Very fine sandy loam	ML	A-4, A-6	0	0	95-100	80-100	85-95	50-60	20-30	NP-10
	48-60	Weathered bedrock			---	---	---	---	---	---	0-0	---
Canyon---------	0-5	Loam	CL	A-4	0	0-5	95-100	95-100	50-67	60-75	30-40	5-15
	5-10	Very fine sandy loam	ML	A-2, A-4, A-6	0	0-5	95-100	95-100	40-57	65-75	20-30	NP-10
	10-60	Weathered bedrock			---	---	---	---	---	---	0-0	---

ENGINEERING INDEX PROPERTIES--Continued
Deuel County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
7120:												
Sulco, moderately eroded--------	0-5	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	5-16	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
	16-26	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
	26-60	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
Mcconaughy, moderately eroded--------	0-7	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	7-18	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	18-28	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	28-60	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
7121:												
Sulco, moderately eroded--------	0-5	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	5-16	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
	16-26	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
	26-60	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
Mcconaughy, moderately eroded--------	0-7	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	7-18	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	18-28	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	28-60	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
7122:												
Sulco, moderately eroded--------	0-5	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	5-16	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
	16-26	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
	26-60	Loam	CL	A-4	0	0	100	100	80-95	60-75	30-40	5-15
Mcconaughy, moderately eroded--------	0-7	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	7-18	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	18-28	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
	28-60	Loam	CL	A-4, A-6	0	0	100	100	80-95	60-75	30-40	5-15
7582:												
Valent---------	0-4	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
	4-60	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
7586:												
Valent---------	0-4	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
	4-60	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
7588:												
Valent, rolling	0-4	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
	4-60	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
Valent, hilly--	0-4	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
	4-60	Fine sand	SP-SM	A-3	0	0	100	100	65-80	20-35	0-0	NP
9975:												
	---	---	---	---	---	---	---	---	---	---	---	---
9985:												
Pits-----------	0-60	Gravelly sand	SP-SC	A-1, A-2, A-3	---	0-5	70-100	50-95	25-65	0-15	0-0	NP
9998:												
Water----------	---	---	---	---	---	---	---	---	---	---	---	---

PHYSICAL PROPERTIES OF THE SOILS
Deuel County, Nebraska: Update

Physical Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K-sat). The estimates in the table indicate the rate of water movement, in micrometers per second (um/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in this table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.

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(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					

2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.

3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.

5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.

6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.

7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.

8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
1130:														
Alliance-----	0-6	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	6-17	26	44	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	17-24	42	43	10-27	1.45-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.5-1.0	.24	.24			
	24-34	42	43	10-27	1.45-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.5-1.0	.24	.24			
	34-47	59	26	10-20	1.30-1.40	0.60-2.00	0.16-0.17	0.0-1.0	0.5-1.0	.24	.24			
	47-54	80	17	2-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	54-80			---	---	0.20-0.60	---	---	---	---	---			
1146:														
Alliance-----	0-6	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	6-14	26	44	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	14-19	26	44	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	19-25	42	43	10-27	1.45-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.5-1.0	.24	.24			
	25-45	59	26	10-20	1.30-1.40	0.60-2.00	0.16-0.17	0.0-1.0	0.5-1.0	.24	.24			
	45-60			---	---	0.20-0.60	---	---	---	---	---			
Rosebud------	0-6	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	3	5	56
	6-11	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	11-17	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.18	3.0-5.9	0.5-1.0	.43	.43			
	17-23	44	41	10-27	1.45-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.5-1.0	.24	.24			
	23-30	61	24	10-20	1.30-1.40	0.60-2.00	0.16-0.17	0.0-1.0	0.5-1.0	.24	.24			
	30-80			---	---	0.20-0.60	---	---	---	---	---			
1198:														
Altvan-------	0-7	65	20	8-20	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20	4	5	56
	7-12	39	37	18-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28			
	12-17	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	17-25	61	24	10-20	1.30-1.40	0.60-2.00	0.16-0.17	0.0-1.0	0.5-1.0	.24	.24			
	25-31	84	6	5-15	1.55-1.75	6.00-20.00	0.08-0.10	0.0-1.0	0.0-0.5	.17	.17			
	31-80	91	6	0-5	1.65-1.85	20.00-20.00	0.02-0.04	0.0-2.9	0.5-1.0	.10	.28			
Eckley-------	0-5	66	19	10-20	1.30-1.50	2.00-6.00	0.13-0.15	0.0-1.0	1.0-3.0	.20	.28	3	3	86
	5-8	57	18	20-30	1.35-1.55	0.20-0.60	0.16-0.18	0.0-2.9	0.5-2.0	.15	.28			
	8-11	66	19	10-20	1.50-1.70	2.00-6.00	0.12-0.14	0.0-2.9	0.5-1.0	.15	.28			
	11-15	91	6	0-5	1.65-1.85	20.00-20.00	0.02-0.04	0.0-2.9	0.5-1.0	.10	.28			
	15-80	91	6	0-5	1.65-1.85	20.00-20.00	0.02-0.04	0.0-2.9	0.5-1.0	.10	.28			
Satanta, sandy substratum--	0-10	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	10-21	44	41	10-27	1.45-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.5-1.0	.24	.24			
	21-30	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.18	3.0-5.9	0.5-1.0	.43	.43			
	30-37	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	37-42	61	24	10-20	1.30-1.40	0.60-2.00	0.16-0.17	0.0-1.0	0.5-1.0	.24	.24			
	42-50	80	17	2-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	50-80	96	1	2-5	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
1295:														
Ashollow-----	0-3	63	25	5-18	1.20-1.40	0.60-2.00	0.17-0.19	0.0-1.0	1.0-2.0	.37	.37	5	3	86
	3-10	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-1.0	1.0-2.0	.37	.37			
	10-32	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.43	.43			
	32-60	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.43	.43			
Tassel-------	0-4	65	27	5-12	1.30-1.70	2.00-6.00	0.16-0.18	0.0-2.9	0.5-1.0	.24	.24	2	3	86
	4-7	65	27	5-12	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.24	.24			
	7-18	65	27	5-12	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.10	.20			
	18-60			---	---	0.20-0.60	---	---	---	---	---			
1588:														
Blueridge----	0-4	91	6	0-5	1.45-1.65	20.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10	2	1	160
	4-40	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
	40-80	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
Altvan-------	0-7	26-52	28-50	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	7-10	57	18	20-30	1.35-1.55	0.20-0.60	0.15-0.17	0.0-2.9	0.5-1.0	.24	.24			
	10-20	57	18	20-30	1.35-1.55	0.20-0.60	0.15-0.17	0.0-2.9	0.5-1.0	.24	.24			
	20-24	61	24	10-20	1.30-1.40	0.60-2.00	0.16-0.17	0.0-1.0	0.5-1.0	.24	.24			
	24-30	84	6	5-15	1.55-1.75	6.00-20.00	0.08-0.10	0.0-1.0	0.0-0.5	.17	.17			
	30-80	75-100	0-15	0-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.10	.15			
1782:														
Broadwater, frequently flooded-----	0-3	86	4	7-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-1.0	0.5-1.0	.17	.17	3	2	134
	3-9	84	9	3-10	1.55-1.75	6.00-20.00	0.08-0.10	0.0-2.9	0.5-1.0	.17	.17			
	9-32	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
	32-60	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
1944:														
Calamus, very rarely flooded-----	0-7	86	4	7-20	1.25-1.55	6.00-20.00	0.10-0.12	0.0-1.0	0.5-1.0	.17	.17	5	2	134
	7-14	96	2	0-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-0.0	0.5-1.0	.17	.17			
	14-22	96	2	0-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-0.0	0.5-1.0	.17	.17			
	22-38	96	2	0-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-0.0	0.5-1.0	.17	.17			
	38-58			0-5	1.65-1.85	20.00-20.00	0.02-0.04	0.0-1.0	0.0-0.5	.15	.17			
	58-60			0-5	1.65-1.85	20.00-20.00	0.02-0.04	0.0-1.0	0.0-0.5	.15	.17			

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Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
2072:														
Chappell-----	0-7	65	20	8-20	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	7-17	65	20	8-20	1.30-1.50	2.00-6.00	0.12-0.16	0.0-2.9	1.0-2.0	.20	.20			
	17-25	65	20	8-20	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.28	.28			
	25-30	65	20	8-20	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.28	.28			
	30-60	92		8-20	1.65-1.85	20.00-20.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
Alice--------	0-8	68	24	7-10	1.30-1.50	2.00-6.00	0.13-0.15	0.0-1.0	1.0-2.0	.20	.20	5	3	86
	8-14	68	24	7-10	1.30-1.50	2.00-6.00	0.13-0.15	0.0-1.0	1.0-2.0	.20	.20			
	14-19	65	23	5-18	1.50-1.70	2.00-6.00	0.12-0.14	0.0-1.0	0.5-1.0	.28	.28			
	19-33	65	23	5-18	1.50-1.70	2.00-6.00	0.11-0.13	0.0-1.0	0.5-1.0	.28	.28			
	33-80	65	23	5-18	1.50-1.70	2.00-6.00	0.11-0.13	0.0-1.0	0.5-1.0	.28	.28			
Broadwater---	0-3	86	4	7-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-1.0	0.5-1.0	.17	.17	3	2	134
	3-9	84	9	3-10	1.55-1.75	6.00-20.00	0.08-0.10	0.0-2.9	0.5-1.0	.17	.17			
	9-32	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
	32-60	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
2630:														
Duroc--------	0-6	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-14	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	14-27	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.43	.43			
	27-32	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.43	.43			
	32-42	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	42-60	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
2638:														
Duroc--------	0-12	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	12-24	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	24-31	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.43	.43			
	31-37	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	37-46	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	46-60	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
2639:														
Duroc--------	0-12	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	12-24	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	24-31	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.43	.43			
	31-37	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	37-46	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	46-60	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
3050:														
Glenberg, rarely flooded-----	0-8	65	20	8-20	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	8-60			5-18	1.40-1.75	2.00-6.00	0.08-0.16	0.0-1.0	0.5-1.0	.28	.28			
3140:														
Gothenburg, occasionally flooded-----	0-5	86	4	7-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-1.0	0.5-1.0	.17	.17	2	8	134
	5-14	96	2	1-5	1.60-1.70	20.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
	14-60	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
3952:														
Jankosh------	0-2	42	38	15-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	2	4L	86
	2-4	42	38	15-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.32	.32			
	4-14	55	17	20-30	1.35-1.65	0.20-0.60	0.16-0.18	0.0-2.9	0.5-1.0	.37	.37			
	14-18	38	36	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.43	.43			
	18-33	62	24	10-18	1.50-1.70	0.60-2.00	0.17-0.19	0.0-1.0	0.0-0.5	.43	.43			
	33-60	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
4028:														
Jayem--------	0-6	68	20	5-18	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	6-9	68	20	5-18	1.50-1.70	2.00-6.00	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20			
	9-22	68	20	5-18	1.50-1.70	2.00-6.00	0.15-0.17	0.0-2.9	0.5-1.0	.32	.32			
	22-50	68	20	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.1-0.5	.32	.32			
	50-60	68	20	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.1-0.5	.32	.32			
4070:														
Johnstown----	0-9	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	9-25	7	62	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	25-29	7	62	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	29-35	42	43	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-2.0	.28	.28			
	35-46	59	26	10-20	1.30-1.40	0.60-2.00	0.16-0.17	0.0-1.0	0.5-1.0	.24	.24			
	46-60	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
Satanta, sandy substratum--	0-8	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-25	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.28	.28			
	25-32	44	41	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-2.0	.28	.28			
	32-52	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	52-60	96	2	2-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
Richfield----	0-7	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	7-12	7	48	40-50	1.20-1.40	0.01-0.06	0.11-0.16	6.0-8.9	1.0-3.0	.28	.28			
	12-17	20	49	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	17-21	24	51	18-27	1.45-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.43			
	21-32	24	51	18-27	1.45-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.43			
	32-42	26	54	18-27	1.45-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.43			
	42-48	68	20	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.28	.28			
	48-78	68	20	5-18	1.50-1.70	2.00-6.00	0.11-0.13	0.0-1.0	0.5-1.0	.28	.28			
	78-80	91	0-15	0-5	1.65-1.85	20.00-20.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.15			

PHYSICAL PROPERTIES OF THE SOILS
Deuel County, Nebraska: Update

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
4151:														
Keith--------	0-6	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-13	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	13-22	7	61	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
	22-31	9	64	20-35	1.40-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.43			
	31-48	9	67	18-27	1.40-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.0-0.5	.43	.43			
	48-60	58	26	10-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
4152:														
Keith--------	0-7	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	7-14	7	61	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-1.0	.43	.43			
	14-19	9	64	20-35	1.40-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.43			
	19-25	42	43	10-27	1.45-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.5-1.0	.24	.24			
	25-60	42	43	10-27	1.45-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.5-1.0	.24	.24			
4310:														
Kuma---------	0-7	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	7-17	36	42	18-27	1.25-1.45	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.28	.28			
	17-24	32	42	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-2.0	.37	.37			
	24-37	32	42	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-2.0	.37	.37			
	37-44	32	42	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-2.0	.37	.37			
	44-60	37	43	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.32	.32			
4311:														
Kuma---------	0-6	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	6-10	7	62	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	10-23	7	62	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	23-33	7	62	27-35	1.25-1.45	0.20-0.60	0.18-0.20	3.0-5.9	0.5-2.0	.37	.37			
	33-41	9	66	18-27	1.45-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.5-1.0	.43	.43			
	41-60	37	43	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.32	.32			
4472:														
Las Animas, frequently flooded-----	0-5	42	38	15-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.32	.32	4	4L	86
	5-11	67	20	8-18	1.50-1.75	2.00-6.00	0.16-0.18	0.0-1.0	0.5-1.0	.24	.24			
	11-33			8-18	1.50-1.75	2.00-6.00	0.11-0.16	0.0-1.0	0.5-1.0	.24	.24			
	33-60			8-18	1.40-1.75	6.00-20.00	0.08-0.18	0.0-1.0	0.5-1.0	.24	.24			
4475:														
Las Animas, occasionally flooded-----	0-5	42	38	15-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.32	.32	4	4L	86
	5-11	67	20	8-18	1.50-1.75	2.00-6.00	0.16-0.18	0.0-1.0	0.5-1.0	.24	.24			
	11-33			8-18	1.50-1.75	2.00-6.00	0.11-0.16	0.0-1.0	0.5-1.0	.24	.24			
	33-60			8-18	1.40-1.75	6.00-20.00	0.08-0.18	0.0-1.0	0.5-1.0	.24	.24			
4592:														
Lexsworth, very rarely flooded-----	0-12	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	12-19	56	14	20-35	1.30-1.50	0.20-0.60	0.15-0.17	0.0-2.9	0.5-1.0	.28	.28			
	19-26	69	19	8-20	1.50-1.70	2.00-6.00	0.06-0.12	0.0-1.0	0.0-0.5	.24	.24			
	26-33	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.10	.15			
	33-52	92	6	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.15			
	52-60	97	1	0-5	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.10	.15			
	60-80	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.10	.15			
4655:														
Lodgepole, ponded------	0-5	24	52	18-27	1.20-1.45	0.60-2.00	0.20-0.23	0.0-2.9	2.0-4.0	.37	.37	3	6	48
	5-14	7	48	40-50	1.20-1.45	0.01-0.06	0.11-0.16	6.0-8.9	1.0-3.0	.28	.28			
	14-26	7	48	40-50	1.25-1.45	0.01-0.06	0.11-0.16	6.0-8.9	1.0-3.0	.28	.28			
	26-32	18	52	27-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	1.0-3.0	.28	.28			
	32-48	39	37	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	48-60	41	37	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
5212:														
Merrick, very rarely flooded-----	0-12	60	18	18-27	1.15-1.35	0.20-0.60	0.18-0.20	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	12-27	37	41	18-27	1.30-1.50	0.20-0.60	0.19-0.22	3.0-5.9	2.0-4.0	.28	.28			
	27-38	35	34	27-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.37	.37			
	38-42	41	37	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	42-53	41	37	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	53-64	60	24	10-18	1.45-1.65	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.37	.37			
	64-80	60	24	10-18	1.45-1.65	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.37	.37			
6132:														
Platte, occasionally flooded-----	0-5	42	38	10-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	3	4L	86
	5-11	68	20	7-18	1.50-1.70	2.00-5.97	0.15-0.17	0.0-2.9	0.0-0.5	.28	.28			
	11-18	68	20	7-18	1.50-1.70	2.00-5.97	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	18-60	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			

PHYSICAL PROPERTIES OF THE SOILS
Deuel County, Nebraska: Update

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
6248:														
Ralton, very rarely flooded-----	0-6	37	43	15-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	4L	86
	6-14	37	43	15-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	14-24			10-25	1.40-1.65	0.60-6.00	0.16-0.18	0.0-1.0	0.0-1.0	.43	.43			
	24-34	58	26	10-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-1.0	0.0-1.0	.43	.43			
	34-51	38	44	15-25	1.40-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-1.0	.43	.43			
	51-71	58	26	10-18	1.40-1.65	2.00-6.00	0.16-0.18	0.0-1.0	0.0-1.0	.43	.43			
	71-80	80	17	0-5	1.40-1.65	20.00-20.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
6625:														
Sarben-------	0-7	84	6	7-12	1.35-1.55	6.00-20.00	0.10-0.12	0.0-1.0	0.5-1.0	.17	.17	5	2	134
	7-15	66	20	10-18	1.50-1.65	2.00-6.00	0.10-0.12	0.0-1.0	0.5-1.0	.24	.24			
	15-32	66	20	10-18	1.50-1.65	2.00-6.00	0.08-0.10	0.0-1.0	0.0-0.5	.24	.24			
	32-60	66	20	10-18	1.50-1.65	2.00-6.00	0.08-0.10	0.0-1.0	0.0-0.5	.24	.24			
6626:														
Sarben-------	0-7	84	6	7-12	1.35-1.55	6.00-20.00	0.10-0.12	0.0-1.0	0.5-1.0	.17	.17	5	2	134
	7-15	66	20	10-18	1.50-1.65	2.00-6.00	0.10-0.12	0.0-1.0	0.5-1.0	.24	.24			
	15-32	66	20	10-18	1.50-1.65	2.00-6.00	0.08-0.10	0.0-1.0	0.0-0.5	.24	.24			
	32-60	66	20	10-18	1.50-1.65	2.00-6.00	0.08-0.10	0.0-1.0	0.0-0.5	.24	.24			
6722:														
Satanta------	0-6	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	1.0-3.0	.43	.43	5	6	48
	6-13	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.28	.28			
	13-19	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.28	.28			
	19-26	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	26-52	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	52-76	84	6	3-15	1.55-1.75	6.00-20.00	0.08-0.10	0.0-1.0	0.0-0.5	.15	.15			
Altvan-------	0-5	65	20	8-20	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20	4	5	56
	5-10	20-45	15-50	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	10-14	20-45	15-50	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	14-24	26-52	28-50	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	24-38	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	38-80	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.05	.10			
6725:														
Ascalon------	0-6	65	20	8-20	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	6-19	57	18	20-30	1.35-1.55	0.20-0.60	0.15-0.17	0.0-2.9	0.5-1.0	.24	.24			
	19-35	65	20	8-20	1.50-1.70	2.00-6.00	0.15-0.17	0.0-2.9	0.5-1.0	.24	.24			
	35-40	65	20	8-20	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.5-1.0	.17	.17			
	40-46	84	6	5-15	1.55-1.75	6.00-20.00	0.08-0.10	0.0-1.0	0.0-0.5	.17	.17			
	46-80			2-10	1.55-1.75	6.00-20.00	0.05-0.10	0.0-1.0	0.0-0.5	.17	.17			
Satanta, sandy substratum--	0-9	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	9-14	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28			
	14-26	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.28	.28			
	26-31	44	41	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-2.0	.28	.28			
	31-55	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	55-80	96	2	2-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
6727:														
Satanta, sandy substratum--	0-9	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	9-14	42	38	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28			
	14-26	34	36	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.28	.28			
	26-31	44	41	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-2.0	.28	.28			
	31-55	62	24	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	55-80	96	2	2-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
Johnstown----	0-6	37	43	18-27	1.25-1.45	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	6-23	27	42	27-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.37	.37			
	23-36	27	42	27-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-2.0	.37	.37			
	36-42	60	26	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.5-2.0	.43	.43			
	42-58	60	26	8-20	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.43	.43			
	58-80	96	2	2-5	1.60-1.80	20.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
Altvan-------	0-5	26-52	28-50	18-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	5-10	20-45	15-50	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	10-17	20-45	15-50	25-35	1.30-1.50	0.20-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.37	.37			
	17-24	26-52	28-50	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	24-30	26-52	28-50	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	30-80	92	7	0-3	1.65-1.85	20.00-20.00	0.02-0.04	0.0-0.0	0.0-0.5	.10	.15			
6817:														
Scoville-----	0-6	84	6	3-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-1.0	0.5-1.0	.17	.17	5	2	134
	6-10	84	6	3-15	1.55-1.75	6.00-20.00	0.10-0.12	0.0-1.0	0.0-0.5	.15	.15			
	10-42	94	1	2-7	1.60-1.80	6.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
	42-46	60	24	8-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-1.0	0.0-0.5	.24	.24			
	46-60	84	6	3-15	1.55-1.75	6.00-20.00	0.08-0.10	0.0-1.0	0.0-0.5	.15	.15			
6930:														
Sidney-------	0-11	43	39	15-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	11-17	43	39	15-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	17-29	61	24	10-18	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.37	.37			
	29-48	61	24	10-18	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.37	.37			
	48-60			---	---	0.20-0.60	---	---	---	---	---			

PHYSICAL PROPERTIES OF THE SOILS
Deuel County, Nebraska: Update

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					
6937:														
Sidney-------	0-11	43	39	15-27	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	4	5	56
	11-17	43	39	15-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	17-29	61	24	10-18	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.37	.37			
	29-48	61	24	10-18	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.5-1.0	.37	.37			
	48-60			---	---	0.20-0.60	---	---	---	---	---			
Canyon-------	0-5	43	39	10-25	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.32	.32	2	4L	86
	5-10	61	24	10-18	1.40-1.60	0.60-2.00	0.16-0.18	0.0-1.0	0.5-2.0	.20	.37			
	10-60			---	---	0.20-0.60	---	---	---	---	---			
7120:														
Sulco, moderately eroded------	0-5	42	42	10-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	5-16	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	16-26	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	26-60	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
Mcconaughy, moderately eroded------	0-7	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	7-18	43	43	10-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	18-28	44	44	5-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.43	---			
	28-60	44	44	5-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.43	---			
7121:														
Sulco, moderately eroded------	0-5	42	42	10-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	5-16	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	16-26	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	26-60	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
Mcconaughy, moderately eroded------	0-7	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	7-18	43	43	10-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	18-28	44	44	5-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.43	---			
	28-60	44	44	5-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.43	---			
7122:														
Sulco, moderately eroded------	0-5	42	42	10-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-2.0	.37	.37	5	4L	86
	5-16	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	16-26	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	26-60	42	42	10-20	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
Mcconaughy, moderately eroded------	0-7	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	7-18	43	43	10-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.43	.43			
	18-28	44	44	5-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.43	---			
	28-60	44	44	5-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.43	---			
7582:														
Valent-------	0-4	94	1	2-8	1.40-1.60	6.00-20.00	0.07-0.09	0.0-0.0	0.5-1.0	.15	.15	5	1	250
	4-60	95	1	2-8	1.60-1.80	6.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
7586:														
Valent-------	0-4	94	1	2-8	1.40-1.60	6.00-20.00	0.07-0.09	0.0-0.0	0.5-1.0	.15	.15	5	1	250
	4-60	95	1	2-8	1.60-1.80	6.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
7588:														
Valent, rolling-----	0-4	94	1	2-8	1.40-1.60	6.00-20.00	0.07-0.09	0.0-0.0	0.5-1.0	.15	.15	5	1	250
	4-60	95	1	2-8	1.60-1.80	6.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
Valent, hilly	0-4	94	1	2-8	1.40-1.60	6.00-20.00	0.07-0.09	0.0-0.0	0.5-1.0	.15	.15	5	1	250
	4-60	95	1	2-8	1.60-1.80	6.00-20.00	0.05-0.07	0.0-0.0	0.0-0.5	.15	.15			
9975:														
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9985:														
Pits---------	0-60	96	2	0-5	1.70-2.00	6.00-20.00	0.02-0.09	0.0-2.9	0.0-0.5	.10	.17	2	8	0
9998:														
Water--------	---			---	---	---	---	---	---	---	---	-	---	0

CHEMICAL PROPERTIES OF THE SOILS
Deuel County, Nebraska

The Chemical Properties table shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils. Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

CHEMICAL PROPERTIES OF THE SOILS--Continued
Deuel County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
1130:							
Alliance--------	0-6	10-40	6.6-7.8	0	0	0	0
	6-17	20-30	6.6-7.8	0	0	0	0
	17-24	5.0-20	7.4-8.4	1-10	0	0	0
	24-34	5.0-20	7.4-8.4	1-10	0	0	0
	34-47	5.0-15	7.4-8.4	1-10	0	0	0
	47-54	0.0-5.0	6.6-7.8	0	0	0	0
	54-80	---	---	---	---	---	---
1146:							
Alliance--------	0-6	10-40	6.6-7.8	0	0	0	0
	6-14	20-30	6.6-7.8	0	0	0	0
	14-19	20-30	6.6-7.8	0	0	0	0
	19-25	5.0-20	7.4-8.4	1-10	0	0	0
	25-45	5.0-15	7.4-8.4	1-10	0	0	0
	45-60	---	---	---	---	---	---
Rosebud---------	0-6	10-40	6.6-7.8	0	0	0	0
	6-11	20-30	6.6-7.8	0	0	0	0
	11-17	20-30	6.6-7.8	0	0	0	0
	17-23	5.0-20	7.4-8.4	1-10	0	0	0
	23-30	5.0-15	7.4-8.4	1-10	0	0	0
	30-80	---	---	---	---	---	---
1198:							
Altvan----------	0-7	5.0-20	6.6-7.8	0	0	0	0
	7-12	10-30	6.1-7.8	0	0	0	0
	12-17	10-20	6.6-8.4	0	0	0	0
	17-25	5.0-15	7.4-8.4	1-10	0	0	0
	25-31	0.0-10	7.4-8.4	1-10	0	0	0
	31-80	0.0-5.0	6.6-7.8	0-5	0	0	0
Eckley----------	0-5	10-30	6.6-7.3	0	0	0	0
	5-8	5.0-25	6.6-7.8	0	0	0	0
	8-11	0.0-15	6.6-7.8	0	0	0	0
	11-15	0.0-5.0	6.6-7.8	0-5	0	0	0
	15-80	0.0-5.0	6.6-7.8	0-5	0	0	0
Satanta, sandy substratum-----	0-10	10-40	6.6-7.8	0	0	0	0
	10-21	5.0-20	7.4-8.4	0	0	0	0
	21-30	20-30	6.6-7.8	0	0	0	0
	30-37	5.0-15	7.4-8.4	1-10	0	0	0
	37-42	5.0-15	7.4-8.4	1-10	0	0	0
	42-50	0.0-5.0	6.6-7.8	0-5	0	0	0
	50-80	0.0-5.0	6.6-7.8	0-5	0	0	0
1295:							
Ashollow--------	0-3	5.0-20	7.4-8.4	1-5	0	0	0
	3-10	0.0-10	7.4-8.4	1-5	0	0	0
	10-32	0.0-10	7.4-8.4	1-10	0	0	0
	32-60	0.0-10	7.4-8.4	1-10	0	0	0
Tassel----------	0-4	5.0-15	7.4-8.4	2-10	0	0	0
	4-7	0.0-5.0	7.4-8.4	2-10	0	0	0
	7-18	0.0-5.0	7.4-8.4	2-15	0	0	0
	18-60	---	---	---	---	---	---
1588:							
Blueridge-------	0-4	0.0-5.0	5.6-7.3	0	0	0	0
	4-40	0.0-0.0	5.6-7.3	0	0	0	0
	40-80	0.0-0.0	5.6-7.3	0	0	0	0
Altvan----------	0-7	10-40	6.1-7.8	0	0	0	0
	7-10	10-25	6.6-7.8	0	0	0	0
	10-20	10-25	6.6-7.8	0	0	0	0
	20-24	5.0-15	7.4-8.4	1-10	0	0	0
	24-30	0.0-10	7.4-8.4	1-10	0	0	0
	30-80	0.0-5.0	7.4-8.4	0-5	0	0	0
1782:							
Broadwater, frequently flooded--------	0-3	0.0-10	6.6-7.8	0-5	0	0	0
	3-9	0.0-5.0	6.6-7.8	0-5	0	0	0
	9-32	0.0-0.0	6.6-7.8	0-5	0	0	0
	32-60	0.0-0.0	6.6-7.8	0-5	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Deuel County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
1944:							
Calamus, very rarely flooded-	0-7	0.0-10	5.6-7.8	0	0	0	0
	7-14	0.0-5.0	6.1-7.8	0	0	0	0
	14-22	0.0-0.0	6.1-7.8	0	0	0	0
	22-38	0.0-0.0	6.1-7.8	0	0	0	0
	38-58	0.0-0.0	6.1-7.8	0	0	0	0
	58-60	0.0-0.0	6.1-7.8	0	0	0	0
2072:							
Chappell--------	0-7	5.0-25	6.1-7.3	0	0	0	0
	7-17	5.0-25	6.1-7.3	0	0	0	0
	17-25	5.0-15	6.6-7.3	0	0	0	0
	25-30	0.0-15	6.6-7.8	0-5	0	0	0
	30-60	0.0-0.0	6.6-7.8	0-5	0	0	0
Alice-----------	0-8	5.0-25	6.6-7.8	0	0	0	0
	8-14	5.0-25	6.6-7.8	0	0	0	0
	14-19	5.0-15	6.6-7.8	0	0	0	0
	19-33	5.0-15	6.6-7.8	0-5	0	0	0
	33-80	5.0-15	6.6-7.8	0-5	0	0	0
Broadwater------	0-3	0.0-10	6.6-7.8	0-5	0	0	0
	3-9	0.0-5.0	6.6-7.8	0-5	0	0	0
	9-32	0.0-0.0	6.6-7.8	0-5	0	0	0
	32-60	0.0-0.0	6.6-7.8	0-5	0	0	0
2630:							
Duroc-----------	0-6	10-40	6.6-7.8	0	0	0	0
	6-14	10-40	6.6-7.8	0	0	0	0
	14-27	10-30	6.6-7.8	0	0	0	0
	27-32	10-30	6.6-7.8	0	0	0	0
	32-42	5.0-25	7.4-8.4	2-10	0	0	0
	42-60	5.0-25	7.4-8.4	2-10	0	0	0
2638:							
Duroc-----------	0-12	10-40	6.6-7.8	0	0	0	0
	12-24	10-40	6.6-7.8	0	0	0	0
	24-31	10-30	6.6-7.8	0	0	0	0
	31-37	10-30	6.6-7.8	2-10	0	0	0
	37-46	5.0-25	7.4-8.4	2-10	0	0	0
	46-60	5.0-25	7.4-8.4	2-10	0	0	0
2639:							
Duroc-----------	0-12	10-40	6.6-7.8	0	0	0	0
	12-24	10-40	6.6-7.8	0	0	0	0
	24-31	10-30	6.6-7.8	0	0	0	0
	31-37	10-30	6.6-7.8	2-10	0	0	0
	37-46	5.0-25	7.4-8.4	2-10	0	0	0
	46-60	5.0-25	7.4-8.4	2-10	0	0	0
3050:							
Glenberg, rarely flooded--------	0-8	5.0-25	7.4-8.4	0-5	0	0	0
	8-60	0.0-15	7.4-8.4	1-10	0	0	0
3140:							
Gothenburg, occasionally flooded--------	0-5	0.0-10	6.6-8.4	0-5	0	0	0
	5-14	0.0-0.0	6.6-8.4	0-5	0	0	0
	14-60	0.0-0.0	6.6-7.8	0	0	0	0
3952:							
Jankosh---------	0-2	10-40	7.4-8.4	1-15	0	2.0-16.0	0-9
	2-4	10-30	7.4-8.4	1-15	0	2.0-16.0	0-9
	4-14	10-30	8.5-9.6	5-15	0	4.0-16.0	13-30
	14-18	10-30	8.5-9.6	5-15	0	4.0-16.0	13-30
	18-33	5.0-15	8.5-9.6	5-15	0	4.0-16.0	13-30
	33-60	0.0-2.0	6.6-7.3	0-5	0	0.0-2.0	0-6
4028:							
Jayem-----------	0-6	5.0-25	6.6-7.8	0	0	0	0
	6-9	5.0-15	6.6-7.8	0	0	0	0
	9-22	5.0-15	6.6-7.8	0	0	0	0
	22-50	5.0-15	6.6-7.8	0-2	0	0	0
	50-60	5.0-15	6.6-7.8	0-2	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Deuel County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
4070:							
Johnstown-------	0-9	10-40	6.6-7.3	0	0	0	0
	9-25	20-50	6.1-7.8	0	0	0	0
	25-29	20-50	6.1-7.8	0	0	0	0
	29-35	10-30	6.6-8.4	1-10	0	0	0
	35-46	5.0-15	7.4-8.4	1-10	0	0	0
	46-60	0.0-0.0	6.6-7.8	0-5	0	0	0
Satanta, sandy substratum-----	0-8	10-40	6.6-7.8	0	0	0	0
	8-25	20-30	6.6-7.8	0	0	0	0
	25-32	10-30	6.6-8.4	0-10	0	0	0
	32-52	5.0-15	7.4-8.4	1-10	0	0	0
	52-60	0.0-5.0	6.6-7.8	0	0	0	0
Richfield-------	0-7	10-40	6.6-7.8	0	0	0	0
	7-12	55-100	6.1-7.8	0	0	0	0
	12-17	20-50	6.1-7.8	0	0	0	0
	17-21	5.0-20	7.4-8.4	0	0	0	0
	21-32	5.0-20	7.4-8.4	1-10	0	0	0
	32-42	5.0-20	7.4-8.4	1-10	0	0	0
	42-48	0.0-15	6.1-8.4	1-10	0	0	0
	48-78	0.0-15	6.1-8.4	1-10	0	0	0
	78-80	0.0-5.0	7.4-8.4	0-5	0	0	0
4151:							
Keith-----------	0-6	10-40	6.6-7.3	0	0	0	0
	6-13	10-40	6.6-7.3	0	0	0	0
	13-22	20-30	6.6-7.8	0	0	0	0
	22-31	10-20	6.6-7.8	0	0	0	0
	31-48	10-20	7.4-8.4	1-10	0	0	0
	48-60	0.0-15	7.4-8.4	1-10	0	0	0
4152:							
Keith-----------	0-7	10-40	6.6-7.3	0	0	0	0
	7-14	20-30	6.6-7.8	0	0	0	0
	14-19	10-20	6.6-7.8	0	0	0	0
	19-25	5.0-20	7.4-8.4	1-10	0	0	0
	25-60	5.0-20	7.4-8.4	1-10	0	0	0
4310:							
Kuma------------	0-7	10-40	6.6-7.8	0	0	0	0
	7-17	10-40	6.6-7.8	0	0	0	0
	17-24	10-30	6.6-7.8	0	0	0	0
	24-37	10-30	6.6-7.8	0	0	0	0
	37-44	5.0-15	6.6-8.4	1-10	0	0	0
	44-60	5.0-15	7.2-8.4	1-10	0	0	0
4311:							
Kuma------------	0-6	10-40	6.6-7.8	0	0	0	0
	6-10	20-50	6.1-7.8	0	0	0	0
	10-23	20-50	6.1-7.8	0	0	0	0
	23-33	20-50	6.1-7.8	0	0	0	0
	33-41	5.0-20	7.4-8.4	1-10	0	0	0
	41-60	5.0-15	7.2-8.4	1-10	0	0	0
4472:							
Las Animas, frequently flooded--------	0-5	10-40	7.4-8.4	1-10	0	0.0-4.0	0
	5-11	5.0-15	7.4-8.4	1-10	0	0.0-4.0	0
	11-33	5.0-15	7.4-8.4	1-10	0	0.0-4.0	0
	33-60	5.0-15	7.4-8.4	1-10	0	0.0-4.0	0
4475:							
Las Animas, occasionally flooded--------	0-5	10-40	7.4-8.4	1-10	0	0.0-4.0	0
	5-11	5.0-15	7.4-8.4	1-10	0	0.0-4.0	0
	11-33	5.0-15	7.4-8.4	1-10	0	0.0-4.0	0
	33-60	5.0-15	7.4-8.4	1-10	0	0.0-4.0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Deuel County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
4592:							
Lexsworth, very rarely flooded-	0-12	10-40	7.4-8.4	0-5	0	2.0-4.0	1-4
	12-19	5.0-20	7.4-8.4	2-9	0	4.0-8.0	2-6
	19-26	0.0-15	7.4-8.4	1-8	0	4.0-8.0	2-6
	26-33	0.0-0.0	7.4-8.4	0	0	4.0-8.0	2-6
	33-52	0.0-0.0	7.4-8.4	0	0	0	0
	52-60	0.0-0.0	7.4-8.4	0	0	0	0
	60-80	0.0-0.0	7.4-8.4	0	0	0	0
4655:							
Lodgepole, ponded---------	0-5	25-55	6.1-7.8	0	0	0	0
	5-14	55-100	6.1-7.8	0	0	0	0
	14-26	55-100	6.1-7.8	0	0	0	0
	26-32	20-55	6.1-7.8	0	0	0	0
	32-48	5.0-20	6.6-8.4	0-10	0	0	0
	48-60	5.0-20	6.6-8.4	0-10	0	0	0
5212:							
Merrick, very rarely flooded-	0-12	25-50	6.6-7.8	0-5	0	0.0-2.0	0
	12-27	20-40	6.6-7.8	0-5	0	0.0-2.0	0
	27-38	20-40	7.4-7.8	1-5	0	0.0-2.0	0
	38-42	5.0-20	7.4-8.4	5-10	0	0.0-2.0	0
	42-53	5.0-20	7.4-8.4	5-10	0	0.0-2.0	0
	53-64	0.0-15	7.4-8.4	5-10	0	0.0-2.0	0
	64-80	0.0-15	7.4-8.4	5-10	0	0.0-2.0	0
6132:							
Platte, occasionally flooded--------	0-5	10-40	6.6-8.4	0-10	0	0.0-2.0	0
	5-11	5.0-15	6.6-8.4	0-5	0	0.0-2.0	0
	11-18	5.0-15	6.6-8.4	0-5	0	0.0-2.0	0
	18-60	0.0-0.0	6.6-8.4	0-5	0	0.0-2.0	0
6248:							
Ralton, very rarely flooded-	0-6	10-40	7.4-8.4	1-10	0	0	0
	6-14	10-40	7.4-8.4	1-10	0	0	0
	14-24	5.0-15	7.4-8.4	1-10	0	0	0
	24-34	5.0-15	7.4-8.4	1-10	0	0	0
	34-51	5.0-20	7.4-8.4	1-10	0	0	0
	51-71	5.0-15	7.4-8.4	1-10	0	0	0
	71-80	0.0-0.0	7.4-8.4	1-10	0	0	0
6625:							
Sarben----------	0-7	0.0-10	6.1-7.3	0	0	0	0
	7-15	5.0-15	6.1-7.3	0	0	0	0
	15-32	5.0-15	6.6-7.8	0-5	0	0	0
	32-60	5.0-15	6.6-7.8	0-5	0	0	0
6626:							
Sarben----------	0-7	0.0-10	6.1-7.3	0	0	0	0
	7-15	5.0-15	6.1-7.3	0	0	0	0
	15-32	5.0-15	6.6-7.8	0-5	0	0	0
	32-60	5.0-15	6.6-7.8	0-5	0	0	0
6722:							
Satanta---------	0-6	5.0-15	7.4-8.4	0	0	0	0
	6-13	20-30	6.6-7.8	0	0	0	0
	13-19	20-30	6.6-7.8	0	0	0	0
	19-26	5.0-15	7.4-8.4	1-10	0	0	0
	26-52	5.0-15	7.4-8.4	1-10	0	0	0
	52-76	0.0-10	6.6-7.8	0-1	0	0	0
Altvan----------	0-5	5.0-20	6.6-7.8	0	0	0	0
	5-10	10-20	6.6-8.4	0	0	0	0
	10-14	10-20	6.6-8.4	0	0	0	0
	14-24	10-20	7.4-8.4	1-10	0	0	0
	24-38	5.0-15	7.4-8.4	1-10	0	0	0
	38-80	0.0-0.0	7.4-8.4	0-5	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Deuel County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
6725:							
Satanta, sandy substratum-----	0-9	10-40	6.6-7.8	0	0	0	0
	9-14	10-40	6.6-7.8	0	0	0	0
	14-26	20-30	6.6-7.8	0	0	0	0
	26-31	10-30	6.6-8.4	0-10	0	0	0
	31-55	5.0-15	7.4-8.4	1-10	0	0	0
	55-80	0.0-5.0	6.6-7.8	0	0	0	0
Ascalon----------	0-6	5.0-20	6.6-7.8	0	0	0	0
	6-19	10-25	6.6-7.8	0	0	0	0
	19-35	5.0-15	7.4-8.4	0-5	0	0	0
	35-40	5.0-15	7.4-8.4	1-10	0	0	0
	40-46	0.0-10	7.4-8.4	1-10	0	0	0
	46-80	0.0-5.0	7.4-8.4	1-5	0	0	0
6727:							
Satanta, sandy substratum-----	0-9	10-40	6.6-7.8	0	0	0	0
	9-14	10-40	6.6-7.8	0	0	0	0
	14-26	20-30	6.6-7.8	0	0	0	0
	26-31	10-30	6.6-8.4	0-10	0	0	0
	31-55	5.0-15	7.4-8.4	1-10	0	0	0
	55-80	0.0-5.0	6.6-7.8	0	0	0	0
Johnstown--------	0-6	10-40	6.6-7.3	0	0	0	0
	6-23	20-30	6.6-7.8	0	0	0	0
	23-36	20-30	6.6-7.8	0	0	0	0
	36-42	5.0-15	7.4-8.4	1-10	0	0	0
	42-58	5.0-15	7.4-8.4	1-10	0	0	0
	58-80	0.0-5.0	6.6-7.8	0	0	0	0
Altvan-----------	0-5	10-40	6.1-7.8	0	0	0	0
	5-10	10-20	6.6-8.4	0	0	0	0
	10-17	10-20	6.6-8.4	0	0	0	0
	17-24	10-20	7.4-8.4	1-10	0	0	0
	24-30	10-20	7.4-8.4	1-10	0	0	0
	30-80	0.0-0.0	7.4-8.4	1-5	0	0	0
6817:							
Scoville---------	0-6	0.0-10	6.1-7.8	0-1	0	0	0
	6-10	0.0-10	6.6-7.8	0-1	0	0	0
	10-42	0.0-5.0	6.6-7.8	0-1	0	0	0
	42-46	0.0-20	7.4-8.4	1-5	0	0	0
	46-60	0.0-10	6.6-7.8	0-1	0	0	0
6930:							
Sidney-----------	0-11	10-40	6.6-7.8	0-5	0	0	0
	11-17	5.0-20	6.6-7.8	1-10	0	0	0
	17-29	5.0-15	7.4-8.4	1-10	0	0	0
	29-48	5.0-15	7.4-8.4	1-10	0	0	0
	48-60	---	---	---	---	---	---
6937:							
Sidney-----------	0-11	10-40	6.6-7.8	0-5	0	0	0
	11-17	5.0-20	6.6-7.8	1-10	0	0	0
	17-29	5.0-15	7.4-8.4	1-10	0	0	0
	29-48	5.0-15	7.4-8.4	1-10	0	0	0
	48-60	---	---	---	---	---	---
Canyon-----------	0-5	10-20	7.4-8.4	1-10	0	0	0
	5-10	5.0-20	7.4-8.4	1-10	0	0	0
	10-60	---	---	---	---	---	---
7120:							
Sulco, moderately eroded---------	0-5	10-30	7.4-8.4	1-5	0	0	0
	5-16	10-30	7.4-8.4	5-10	0	0	0
	16-26	5.0-20	7.4-8.4	5-10	0	0	0
	26-60	5.0-20	7.4-8.4	5-10	0	0	0
Mcconaughy, moderately eroded---------	0-7	10-30	6.6-7.8	0	0	0	0
	7-18	10-30	6.6-7.8	0	0	0	0
	18-28	5.0-20	7.4-8.4	1-10	0	0	0
	28-60	5.0-20	7.4-8.4	1-10	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Deuel County, Nebraska

Map symbol and soil name	Depth	Cation-exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
7121:							
Sulco, moderately eroded---	0-5	10-30	7.4-8.4	1-5	0	0	0
	5-16	10-30	7.4-8.4	5-10	0	0	0
	16-26	5.0-20	7.4-8.4	5-10	0	0	0
	26-60	5.0-20	7.4-8.4	5-10	0	0	0
Mcconaughy, moderately eroded---	0-7	10-30	6.6-7.8	0	0	0	0
	7-18	10-30	6.6-7.8	0	0	0	0
	18-28	5.0-20	7.4-8.4	1-10	0	0	0
	28-60	5.0-20	7.4-8.4	1-10	0	0	0
7122:							
Sulco, moderately eroded---	0-5	10-30	7.4-8.4	1-5	0	0	0
	5-16	10-30	7.4-8.4	5-10	0	0	0
	16-26	5.0-20	7.4-8.4	5-10	0	0	0
	26-60	5.0-20	7.4-8.4	5-10	0	0	0
Mcconaughy, moderately eroded---	0-7	10-30	6.6-7.8	0	0	0	0
	7-18	10-30	6.6-7.8	0	0	0	0
	18-28	5.0-20	7.4-8.4	1-10	0	0	0
	28-60	5.0-20	7.4-8.4	1-10	0	0	0
7582:							
Valent---	0-4	0.0-5.0	6.6-7.8	0	0	0	0
	4-60	0.0-0.0	6.6-7.8	0	0	0	0
7586:							
Valent---	0-4	0.0-5.0	6.6-7.8	0	0	0	0
	4-60	0.0-0.0	6.6-7.8	0	0	0	0
7588:							
Valent, rolling-	0-4	0.0-5.0	6.6-7.8	0	0	0	0
	4-60	0.0-0.0	6.6-7.8	0	0	0	0
Valent, hilly---	0-4	0.0-5.0	6.6-7.8	0	0	0	0
	4-60	0.0-0.0	6.6-7.8	0	0	0	0
9975:							
	---	---	---	---	---	---	---
9985:							
Pits---	0-60	0.0-5.0	6.6-8.4	0	0	0	0
9998:							
Water---	---	---	---	---	---	---	---

WATER FEATURES
Deuel County, Nebraska

The Water Features table gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The Water Features table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The Water Features table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

WATER FEATURES--Continued
Deuel County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
1130:									
Alliance	B		---	---	---	---	---	---	---
1146:									
Alliance	B		---	---	---	---	---	---	---
Rosebud	B		---	---	---	---	---	---	---
1198:									
Altvan	B		---	---	---	---	---	---	---
Eckley	B		---	---	---	---	---	---	---
Satanta, sandy substratum-	B		---	---	---	---	---	---	---
1295:									
Ashollow	B		---	---	---	---	---	---	---
Tassel	D		---	---	---	---	---	---	---
1588:									
Blueridge	A		---	---	---	---	---	---	---
Altvan	B		---	---	---	---	---	---	---
1782:									
Broadwater, frequently flooded	A								
		March	---	---	---	---	---	Very brief	Frequent
		April	---	---	---	---	---	Very brief	Frequent
		May	---	---	---	---	---	Very brief	Frequent
		June	---	---	---	---	---	Very brief	Frequent
		July	---	---	---	---	---	Very brief	Frequent
		August	---	---	---	---	---	Very brief	Frequent
1944:									
Calamus, very rarely flooded	A								
		February	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		March	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		April	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		May	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		June	3.0-6.0	>6.0	---	---	---	---	None
		July	3.0-6.0	>6.0	---	---	---	---	None
		August	3.0-6.0	>6.0	---	---	---	---	None
		September	3.0-6.0	>6.0	---	---	---	---	None
		October	3.0-6.0	>6.0	---	---	---	---	None
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
2072:									
Chappell	A		---	---	---	---	---	---	---
Alice	B		---	---	---	---	---	---	---
Broadwater	A								
		March	---	---	---	---	---	Very brief	Occasional
		April	---	---	---	---	---	Very brief	Occasional
		May	---	---	---	---	---	Very brief	Occasional
		June	---	---	---	---	---	Very brief	Occasional
		July	---	---	---	---	---	Very brief	Occasional
		August	---	---	---	---	---	Very brief	Occasional
2630:									
Duroc	B		---	---	---	---	---	---	---
2638:									
Duroc	B		---	---	---	---	---	---	---
2639:									
Duroc	B		---	---	---	---	---	---	---
3050:									
Glenberg, rarely flooded	B								
		March	---	---	---	---	---	Very brief	Rare
		April	---	---	---	---	---	Very brief	Rare
		May	---	---	---	---	---	Very brief	Rare
		June	---	---	---	---	---	Very brief	Rare
		July	---	---	---	---	---	Very brief	Rare
		August	---	---	---	---	---	Very brief	Rare
3140:									

WATER FEATURES--Continued
Deuel County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Gothenburg, occasionally flooded----------	D								
		January	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		February	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		March	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		April	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		May	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		June	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		July	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		August	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		September	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		October	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		November	0.0-1.5	>6.0	---	---	---	Brief	Occasional
		December	0.0-1.5	>6.0	---	---	---	Brief	Occasional
3952:									
Jankosh----------	C								
		January	1.5-3.0	>6.0	---	---	---	Brief	Rare
		February	1.5-3.0	>6.0	---	---	---	Brief	Rare
		March	1.5-3.0	>6.0	---	---	---	Brief	Rare
		April	1.5-3.0	>6.0	---	---	---	Brief	Rare
		May	1.5-3.0	>6.0	---	---	---	Brief	Rare
		June	1.5-3.0	>6.0	---	---	---	Brief	Rare
		July	1.5-3.0	>6.0	---	---	---	Brief	Rare
		August	1.5-3.0	>6.0	---	---	---	Brief	Rare
		September	1.5-3.0	>6.0	---	---	---	Brief	Rare
		October	1.5-3.0	>6.0	---	---	---	Brief	Rare
		November	1.5-3.0	>6.0	---	---	---	Brief	Rare
		December	1.5-3.0	>6.0	---	---	---	Brief	Rare
4028:									
Jayem----------	B		---	---	---	---	---	---	---
4070:									
Johnstown----------	B		---	---	---	---	---	---	---
Satanta, sandy substratum-	B		---	---	---	---	---	---	---
Richfield----------	B		---	---	---	---	---	---	---
4151:									
Keith----------	B		---	---	---	---	---	---	---
4152:									
Keith----------	B		---	---	---	---	---	---	---
4310:									
Kuma----------	B		---	---	---	---	---	---	---
4311:									
Kuma----------	B		---	---	---	---	---	---	---
4472:									
Las Animas, frequently flooded----------	D								
		January	0.0-1.5	>6.0	---	---	---	---	None
		February	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		March	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		April	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		May	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		June	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		July	0.0-1.5	>6.0	---	---	---	Brief	Frequent
		August	0.0-1.5	>6.0	---	---	---	---	None
		September	0.0-1.5	>6.0	---	---	---	---	None
		October	0.0-1.5	>6.0	---	---	---	---	None
		November	0.0-1.5	>6.0	---	---	---	---	None
		December	0.0-1.5	>6.0	---	---	---	---	None
4475:									
Las Animas, occasionally flooded----------	D								
		January	1.5-3.0	>6.0	---	---	---	---	None
		February	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		March	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		April	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		June	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		July	1.5-3.0	>6.0	---	---	---	Brief	Occasional
		August	1.5-3.0	>6.0	---	---	---	---	None
		September	1.5-3.0	>6.0	---	---	---	---	None
		October	1.5-3.0	>6.0	---	---	---	---	None
		November	1.5-3.0	>6.0	---	---	---	---	None
		December	1.5-3.0	>6.0	---	---	---	---	None
4592:									

WATER FEATURES--Continued
Deuel County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Lexsworth, very rarely flooded	B								
		January	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		February	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		March	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		April	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		May	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		June	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		July	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		August	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		September	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		October	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		November	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
		December	5.0-8.0	>6.0	---	---	---	Very brief	Very rare
4655:									
Lodgepole, ponded	D								
		March	0.0	>6.0	0.5-1.0	Brief	Occasional	---	None
		April	0.0	>6.0	0.5-1.0	Brief	Occasional	---	None
		May	0.0	>6.0	0.5-1.0	Brief	Occasional	---	None
		June	0.0	>6.0	0.5-1.0	Brief	Occasional	---	None
		July	0.0	>6.0	0.5-1.0	Brief	Occasional	---	None
		August	---	---	0.5-1.0	Brief	Occasional	---	None
		September	---	---	0.5-1.0	Brief	Occasional	---	None
5212:									
Merrick, very rarely flooded	B								
		January	4.0-6.0	>6.0	---	---	---	Very brief	Very rare
		February	4.0-6.0	>6.0	---	---	---	Very brief	Very rare
		March	4.0-6.0	>6.0	---	---	---	Very brief	Very rare
		April	4.0-6.0	>6.0	---	---	---	Very brief	Very rare
		May	4.0-6.0	>6.0	---	---	---	Very brief	Very rare
		June	4.0-6.0	>6.0	---	---	---	---	None
		July	4.0-6.0	>6.0	---	---	---	---	None
		August	4.0-6.0	>6.0	---	---	---	---	None
		September	4.0-6.0	>6.0	---	---	---	---	None
		October	4.0-6.0	>6.0	---	---	---	---	None
		November	4.0-6.0	>6.0	---	---	---	---	None
		December	4.0-6.0	>6.0	---	---	---	---	None
6132:									
Platte, occasionally flooded	B								
		January	1.0-3.0	>6.0	---	---	---	---	None
		February	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		March	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		April	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		June	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		July	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		August	1.0-3.0	>6.0	---	---	---	---	None
		September	1.0-3.0	>6.0	---	---	---	---	None
		October	1.0-3.0	>6.0	---	---	---	---	None
		November	1.0-3.0	>6.0	---	---	---	---	None
		December	1.0-3.0	>6.0	---	---	---	---	None
6248:									
Ralton, very rarely flooded	B								
		January	3.0-6.0	>6.0	---	---	---	---	None
		February	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		March	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		April	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		May	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		June	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		July	3.0-6.0	>6.0	---	---	---	Very brief	Very rare
		August	3.0-6.0	>6.0	---	---	---	---	None
		September	3.0-6.0	>6.0	---	---	---	---	None
		October	3.0-6.0	>6.0	---	---	---	---	None
		November	3.0-6.0	>6.0	---	---	---	---	None
		December	3.0-6.0	>6.0	---	---	---	---	None
6625:									
Sarben	B		---	---	---	---	---	---	---
6626:									
Sarben	B		---	---	---	---	---	---	---
6722:									
Satanta	B		---	---	---	---	---	---	---
Altvan	B		---	---	---	---	---	---	---
6725:									
Ascalon	B		---	---	---	---	---	---	---
Satanta, sandy substratum-	B		---	---	---	---	---	---	---

WATER FEATURES--Continued
Deuel County, Nebraska

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydrologic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
6727:									
Satanta, sandy substratum-	B		---	---	---	---	---	---	---
Johnstown----------	B		---	---	---	---	---	---	---
Altvan----------	B		---	---	---	---	---	---	---
6817:									
Scoville----------	A		---	---	---	---	---	---	---
6930:									
Sidney----------	B		---	---	---	---	---	---	---
6937:									
Sidney----------	B		---	---	---	---	---	---	---
Canyon----------	D		---	---	---	---	---	---	---
7120:									
Sulco, moderately eroded--	B		---	---	---	---	---	---	---
Mcconaughy, moderately eroded----------	B		---	---	---	---	---	---	---
7121:									
Sulco, moderately eroded--	B		---	---	---	---	---	---	---
Mcconaughy, moderately eroded----------	B		---	---	---	---	---	---	---
7122:									
Sulco, moderately eroded--	B		---	---	---	---	---	---	---
Mcconaughy, moderately eroded----------	B		---	---	---	---	---	---	---
7582:									
Valent----------	A		---	---	---	---	---	---	---
7586:									
Valent----------	A		---	---	---	---	---	---	---
7588:									
Valent, rolling----------	A		---	---	---	---	---	---	---
Valent, hilly----------	A		---	---	---	---	---	---	---
9985:									
Pits----------	A		---	---	---	---	---	---	---
9998:									
Water----------	---		---	---	---	---	---	---	---

SOIL FEATURES
Deuel County, Nebraska

The following table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as low, moderate, or high, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as low, moderate, or high. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

SOIL FEATURES--Continued
Deuel County, Nebraska

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
1130:							
Alliance--------	40-60	Bedrock (paralithic)	---	Weakly cemented	Moderate	Moderate	Low
1146:							
Alliance--------	40-60	Bedrock (paralithic)	---	Weakly cemented	Moderate	Moderate	Low
Rosebud---------	20-40	Bedrock (paralithic)	---	Weakly cemented	Moderate	High	Low
1198:							
Altvan----------	---	---	---	---	Moderate	Low	Low
Eckley----------	---	---	---	---	Low	Moderate	Low
Satanta, sandy substratum-----	---	---	---	---	Moderate	Low	Low
1295:							
Ashollow--------	---	---	---	---	Low	Low	Low
Tassel----------	6-20	Bedrock (paralithic)	---	Moderately cemented	Low	High	Low
1588:							
Blueridge-------	---	---	---	---	Low	Low	Low
Altvan----------	---	---	---	---	Moderate	Low	Low
1782:							
Broadwater, frequently flooded--------	---	---	---	---	Low	Low	Low
1944:							
Calamus, very rarely flooded-	---	---	---	---	Low	Low	Low
2072:							
Chappell--------	---	---	---	---	Low	Low	Low
Alice-----------	---	---	---	---	Moderate	Low	Low
Broadwater------	---	---	---	---	Low	Low	Low
2630:							
Duroc-----------	---	---	---	---	Low	Low	Low
2638:							
Duroc-----------	---	---	---	---	Low	Low	Low
2639:							
Duroc-----------	---	---	---	---	Low	Low	Low
3050:							
Glenberg, rarely flooded--------	---	---	---	---	Moderate	Low	Low
3140:							
Gothenburg, occasionally flooded--------	---	---	---	---	Moderate	Moderate	Low
3952:							
Jankosh---------	---	---	---	---	Moderate	High	High
4028:							
Jayem-----------	---	---	---	---	Low	Moderate	Low
4070:							
Johnstown-------	---	---	---	---	Moderate	Moderate	Low
Satanta, sandy substratum-----	---	---	---	---	Moderate	Low	Low
Richfield-------	---	---	---	---	Low	High	Low
4151:							
Keith-----------	---	---	---	---	Moderate	Moderate	Low
4152:							
Keith-----------	---	---	---	---	Moderate	Moderate	Low
4310:							
Kuma------------	---	---	---	---	Moderate	High	Moderate
4311:							
Kuma------------	---	---	---	---	Moderate	High	Moderate
4472:							
Las Animas, frequently flooded--------	---	---	---	---	High	High	Moderate
4475:							
Las Animas, occasionally flooded--------	---	---	---	---	High	High	Moderate
4592:							
Lexsworth, very rarely flooded-	---	---	---	---	High	Moderate	Low
4655:							
Lodgepole, ponded---------	---	---	---	---	High	High	Low
5212:							
Merrick, very rarely flooded-	---	---	---	---	Moderate	Low	Low
6132:							
Platte, occasionally flooded--------	---	---	---	---	Moderate	High	Moderate
6248:							
Ralton, very rarely flooded-	---	---	---	---	Moderate	High	Low
6625:							
Sarben----------	---	---	---	---	Low	High	Low

SOIL FEATURES--Continued
Deuel County, Nebraska

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
		In	In				
6626:							
Sarben----------	---	---	---	---	Low	High	Low
6722:							
Satanta---------	---	---	---	---	Moderate	Low	Low
Altvan----------	---	---	---	---	Moderate	Low	Low
6725:							
Ascalon---------	---	---	---	---	Moderate	Moderate	Low
Satanta, sandy substratum-----	---	---	---	---	Moderate	Low	Low
6727:							
Satanta, sandy substratum-----	---	---	---	---	Moderate	Low	Low
Johnstown-------	---	---	---	---	Moderate	Moderate	Low
Altvan----------	---	---	---	---	Moderate	Low	Low
6817:							
Scoville--------	---	---	---	---	Low	High	Low
6930:							
Sidney----------	40-60	Bedrock (paralithic)	---	Weakly cemented	Moderate	High	Low
6937:							
Sidney----------	40-60	Bedrock (paralithic)	---	Weakly cemented	Moderate	High	Low
Canyon----------	6-20	Bedrock (paralithic)	---	Weakly cemented	Low	Low	Low
7120:							
Sulco, moderately eroded---------	---	---	---	---	Low	High	Low
Mcconaughy, moderately eroded---------	---	---	---	---	Moderate	High	Moderate
7121:							
Sulco, moderately eroded---------	---	---	---	---	Low	High	Low
Mcconaughy, moderately eroded---------	---	---	---	---	Moderate	High	Moderate
7122:							
Sulco, moderately eroded---------	---	---	---	---	Low	High	Low
Mcconaughy, moderately eroded---------	---	---	---	---	Moderate	High	Moderate
7582:							
Valent----------	---	---	---	---	Low	Moderate	Low
7586:							
Valent----------	---	---	---	---	Low	Moderate	Low
7588:							
Valent, rolling-	---	---	---	---	Low	Moderate	Low
Valent, hilly---	---	---	---	---	Low	Moderate	Low
9975:							
	---	---	---	---	---	---	---
9985:							
Pits------------	---	---	---	---	Low	Low	Low
9998:							
Water-----------	---	---	---	---	---	---	---

WATER MANAGEMENT
Deuel County, Nebraska

The soils of the survey area are rated in the Water Management table according to limitations that affect their suitability for water management. Soils are rated for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways. Restrictive features that affect each soil for the specified use is also provided in the table.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Moderately limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limited indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but generally require special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate to high maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Limitation class terms, such as very limited or limited, etc., limitation ratings, and numerical ratings are shown for each soil feature listed. As many as three soil features may be listed for each soil component if applicable. The overall limitation rating for the soil component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorablecompaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects theamount of usable material. It also affects traffic ability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditch banks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a very limited hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, which conduct surface water to outlets at a non-erosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
1130:				
Alliance	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
1146:				
Alliance	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
Rosebud	Limitation: deep to water	Limitation: depth to rock	Limitation: erodes easily depth to rock	Limitation: erodes easily too arid
1198:				
Altvan	Limitation: deep to water	Limitation: slope	Limitation: erodes easily too sandy	Limitation: erodes easily too arid
Eckley	Limitation: deep to water	Limitation: slope droughty	Limitation: too sandy	Limitation: too arid droughty
Satanta, sandy substratum	Limitation: deep to water	Favorable	Favorable	Limitation: too arid
1295:				
Ashollow	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily slope soil blowing	Limitation: erodes easily slope too arid
Tassel	Limitation: deep to water	Limitation: slope soil blowing	Limitation: slope soil blowing depth to rock	Limitation: slope too arid
1588:				
Blueridge	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
Altvan	Limitation: deep to water	Limitation: slope	Limitation: erodes easily too sandy	Limitation: erodes easily too arid
1782:				
Broadwater, frequently flooded	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
1944:				
Calamus, very rarely flooded	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
2072:				
Chappell	Limitation: deep to water	Limitation: droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
Alice	Limitation: deep to water	Limitation: soil blowing droughty	Limitation: soil blowing	Limitation: too arid droughty
Broadwater	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
2630:				
Duroc	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
2638:				
Duroc	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
2639:				
Duroc	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
3050:				
Glenberg, rarely flooded	Limitation: deep to water	Limitation: soil blowing droughty	Limitation: too sandy	Limitation: too arid droughty
3140:				
Gothenburg, occasionally flooded	Limitation: flooding cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness	Limitation: wetness droughty

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
3952:				
Jankosh	Limitation: excess salt cutbanks cave	Limitation: rooting depth wetness	Limitation: erodes easily too sandy wetness	Limitation: erodes easily excess salt rooting depth
4028:				
Jayem	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Limitation: too arid
4070:				
Johnstown	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Satanta, sandy substratum	Limitation: deep to water	Favorable	Favorable	Limitation: too arid
Richfield	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
4151:				
Keith	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
4152:				
Keith	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
4310:				
Kuma	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
4311:				
Kuma	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
4472:				
Las Animas, frequently flooded	Limitation: flooding frost action cutbanks cave	Limitation: rooting depth wetness droughty	Limitation: wetness	Limitation: rooting depth wetness droughty
4475:				
Las Animas, occasionally flooded	Limitation: flooding frost action cutbanks cave	Limitation: rooting depth wetness droughty	Limitation: wetness	Limitation: rooting depth wetness droughty
4592:				
Lexsworth, very rarely flooded	Limitation: deep to water	Favorable	Limitation: too sandy	Favorable
4655:				
Lodgepole, ponded	Limitation: frost action percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly wetness
5212:				
Merrick, very rarely flooded	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
6132:				
Platte, occasionally flooded	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: rooting depth wetness droughty
6248:				
Ralton, very rarely flooded	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
6625:				
Sarben	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: rooting depth droughty
6626:				
Sarben	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: rooting depth droughty
6722:				
Satanta	Limitation: deep to water	Limitation: slope	Favorable	Limitation: too arid
Altvan	Limitation: deep to water	Limitation: slope	Limitation: erodes easily too sandy	Limitation: erodes easily too arid

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting-- Drainage	Irrigation	Terraces and diversions	Grassed waterways
6725:				
Ascalon	Limitation: deep to water	Limitation: droughty	Limitation: soil blowing	Limitation: too arid droughty
Satanta, sandy substratum	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Limitation: too arid
6727:				
Satanta, sandy substratum	Limitation: deep to water	Favorable	Favorable	Limitation: too arid
Johnstown	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
Altvan	Limitation: deep to water	Favorable	Limitation: erodes easily too sandy	Limitation: erodes easily too arid
6817:				
Scoville	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
6930:				
Sidney	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
6937:				
Sidney	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
Canyon	Limitation: deep to water	Limitation: slope depth to rock	Limitation: depth to rock	Limitation: too arid
7120:				
Sulco, moderately eroded	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily too arid
Mcconaughy, moderately eroded	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
7121:				
Sulco, moderately eroded	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily too arid
Mcconaughy, moderately eroded	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
7122:				
Sulco, moderately eroded	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily too arid
Mcconaughy, moderately eroded	Limitation: deep to water	Limitation: slope	Limitation: erodes easily	Limitation: erodes easily too arid
7582:				
Valent	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
7586:				
Valent	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
7588:				
Valent, rolling	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
Valent, hilly	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy soil blowing	Limitation: slope too arid droughty
9975:	---	---	---	---

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
9985: Pits	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy	Limitation: rooting depth slope droughty
9998: Water	---	---	---	---

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1130:							
Alliance	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Deep to water	1.00
		Depth to bedrock	0.00	Seepage	0.05		
				Thin layer	0.03		
1146:							
Alliance	65	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Deep to water	1.00
		Depth to bedrock	0.00	Thin layer	0.11		
				Seepage	0.05		
Rosebud	25	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Deep to water	1.00
		Depth to bedrock	0.11	Thin layer	0.85		
				Seepage	0.06		
1198:							
Altvan	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.95	Deep to water	1.00
Eckley	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.95	Deep to water	1.00
Satanta, sandy substratum	20	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
1295:							
Ashollow	65	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
		Slope	0.01	Seepage	0.07		
Tassel	30	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.74	Thin layer	1.00	Deep to water	1.00
		Slope	0.12	Seepage	0.08		
		Seepage	0.05				
1588:							
Blueridge	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.97	Deep to water	1.00
		Slope	0.08				
Altvan	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
1782:							
Broadwater, frequently flooded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.97	Deep to water	1.00
1944:							
Calamus, very rarely flooded	95	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.17	Cutbanks cave	1.00
						Deep to water	0.96
2072:							
Chappell	38	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Deep to water	1.00
Alice	33	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Deep to water	1.00
Broadwater	24	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.97	Deep to water	1.00
2630:							
Duroc	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
2638:							
Duroc	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
2639:							
Duroc	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3050:							
Glenberg, rarely flooded	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Deep to water	1.00
3140:							
Gothenburg, occasionally flooded	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	1.00		
3952:							
Jankosh	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Cutbanks cave	1.00
				Seepage	0.97	Salty water	0.50
				Depth to saturated zone	0.95	Deep to water	0.02
				Salinity	0.12		
4028:							
Jayem	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Deep to water	1.00
4070:							
Johnstown	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.97	Deep to water	1.00
				Piping	0.87		
Satanta, sandy substratum	31	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
				Piping	1.00		
Richfield	29	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Deep to water	1.00
				Seepage	0.95		
4151:							
Keith	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Deep to water	1.00
				Seepage	0.05		
4152:							
Keith	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
4310:							
Kuma	95	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
4311:							
Kuma	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.18	Deep to water	1.00
4472:							
Las Animas, frequently flooded	95	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.04		
4475:							
Las Animas, occasionally flooded	92	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.95	Cutbanks cave	1.00
				Seepage	0.04	Deep to water	0.02
4592:							
Lexsworth, very rarely flooded	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.98	Deep to water	1.00
				Piping	0.02		
4655:							
Lodgepole, ponded	95	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Ponding	1.00	Slow refill	0.30

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	0.05		
5212:							
Merrick, very rarely flooded	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
				Seepage	0.06		
6132:							
Platte, occasionally flooded	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.97	Deep to water	0.00
6248:							
Ralton, very rarely flooded	90	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Piping	1.00	Deep to water	0.96
				Seepage	0.23	Cutbanks cave	0.10
6625:							
Sarben	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Deep to water	1.00
6626:							
Sarben	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.09	Deep to water	1.00
6722:							
Satanta	65	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.39	Deep to water	1.00
Altvan	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.97	Deep to water	1.00
6725:							
Ascalon	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Deep to water	1.00
Satanta, sandy substratum	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
6727:							
Satanta, sandy substratum	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
Johnstown	18	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
Altvan	15	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.97	Deep to water	1.00
6817:							
Scoville	95	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
6930:							
Sidney	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Deep to water	1.00
		Depth to bedrock	0.00	Thin layer	0.11		
				Seepage	0.06		
6937:							
Sidney	65	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Deep to water	1.00
		Depth to bedrock	0.00	Thin layer	0.11		
				Seepage	0.06		
Canyon	25	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.74	Thin layer	1.00	Deep to water	1.00
		Seepage	0.05				
7120:							
Sulco, moderately eroded	55	Somewhat limited		Very limited		Very limited	

WATER MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer-fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Seepage	0.70	Piping	1.00	Deep to water	1.00
Mcconaughy, moderately eroded--	30	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
7121:							
Sulco, moderately eroded----------	65	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
Mcconaughy, moderately eroded--	25	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
7122:							
Sulco, moderately eroded----------	70	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
		Slope	0.03				
Mcconaughy, moderately eroded--	20	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Deep to water	1.00
		Slope	0.00				
7582:							
Valent----------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
7586:							
Valent----------	95	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
		Slope	0.06				
7588:							
Valent, rolling-----	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
		Slope	0.06				
Valent, hilly-------	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Deep to water	1.00
		Slope	0.92				
9985:							
Pits----------	100	Not rated		Not rated		Not rated	
9998:							
Water----------	100	Not rated		Not rated		Not rated	

SANITARY FACILITIES
Deuel County, Nebraska

Sanitary Facilities

The following tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A trench sanitary landfill is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

SANITARY FACILITIES
Deuel County, Nebraska

In an area sanitary landfill, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1130:					
Alliance	90	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to bedrock	0.59	Depth to soft bedrock	0.13
		Restricted permeability	0.50		
1146:					
Alliance	65	Somewhat limited		Somewhat limited	
		Depth to bedrock	0.78	Seepage	0.53
		Restricted permeability	0.50	Depth to soft bedrock	0.42
				Slope	0.00
Rosebud	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Restricted permeability	0.46	Seepage	0.53
				Slope	0.00
1198:					
Altvan	45	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.46	Slope	0.91
Eckley	30	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.91
Satanta, sandy substratum	20	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	1.00	Slope	0.91
1295:					
Ashollow	65	Somewhat limited		Very limited	
		Slope	0.84	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Tassel	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	1.00
1588:					
Blueridge	50	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Slope	1.00	Slope	1.00
Altvan	35	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.46	Slope	1.00
		Slope	0.00		
1782:					
Broadwater, frequently flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	1.00	Seepage	1.00
1944:					
Calamus, very rarely flooded	95	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	0.84	Flooding	0.20
		Flooding	0.20	Depth to saturated zone	0.17
2072:					
Chappell	38	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
Alice	33	Not limited		Very limited	
				Seepage	1.00
Broadwater	24	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Filtering capacity	1.00	Seepage	1.00
2630:					
Duroc	90	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
2638:					
Duroc	90	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
2639:					
Duroc	90	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
3050:					
Glenberg, rarely flooded	90	Somewhat limited		Very limited	
		Flooding	0.40	Seepage	1.00
				Flooding	0.40
3140:					
Gothenburg, occasionally flooded	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
3952:					
Jankosh	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Flooding	0.40
		Flooding	0.40		
4028:					
Jayem	90	Not limited		Very limited	
				Seepage	1.00
4070:					
Johnstown	35	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	1.00		
Satanta, sandy substratum	31	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	1.00		
Richfield	29	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50		
4151:					
Keith	90	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.53
				Slope	0.00
4152:					
Keith	90	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Slope	0.50
				Seepage	0.50
4310:					
Kuma	95	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
4311:					
Kuma	90	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.00
4472:					
Las Animas, frequently flooded	95	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
4475:					
Las Animas, occasionally flooded	92	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
4592:					
Lexsworth, very rarely flooded	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Flooding	0.20	Flooding	0.20
4655:					
Lodgepole, ponded	95	Very limited		Very limited	
		Restricted permeability	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.50
5212:					
Merrick, very rarely flooded	90	Very limited		Somewhat limited	
		Restricted permeability	1.00	Seepage	0.50
		Depth to saturated zone	0.40	Flooding	0.20
		Flooding	0.20		
6132:					
Platte, occasionally flooded	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
6248:					
Ralton, very rarely flooded	90	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	0.84	Flooding	0.20
		Restricted permeability	0.50	Depth to saturated zone	0.17
		Flooding	0.20		
6625:					
Sarben	90	Not limited		Very limited	
				Seepage	1.00
				Slope	0.00
6626:					
Sarben	90	Not limited		Very limited	
				Seepage	1.00
				Slope	0.50
6722:					
Satanta	65	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.48	Slope	0.50
Altvan	25	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Slope	0.50
6725:					
Ascalon	45	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
Satanta, sandy substratum	45	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	1.00		
6727:					
Satanta, sandy substratum---	60	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	1.00	Slope	0.00
Johnstown----------	18	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	1.00	Slope	0.00
Altvan-------------	15	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.50	Slope	0.00
6817:					
Scoville-----------	95	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.48		
6930:					
Sidney-------------	85	Somewhat limited		Somewhat limited	
		Depth to bedrock	0.78	Seepage	0.53
		Restricted permeability	0.46	Slope	0.50
				Depth to soft bedrock	0.42
6937:					
Sidney-------------	65	Somewhat limited		Very limited	
		Depth to bedrock	0.78	Slope	1.00
		Restricted permeability	0.46	Seepage	0.53
				Depth to soft bedrock	0.42
Canyon-------------	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
				Slope	1.00
7120:					
Sulco, moderately eroded-------------	55	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Slope	0.67
				Seepage	0.50
Mcconaughy, moderately eroded--	30	Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Seepage	0.50
				Slope	0.33
7121:					
Sulco, moderately eroded-------------	65	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
				Seepage	0.50
Mcconaughy, moderately eroded--	25	Somewhat limited		Very limited	
		Restricted permeability	0.50	Slope	1.00
				Seepage	0.50
7122:					
Sulco, moderately eroded-------------	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
Mcconaughy, moderately eroded--	20	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Restricted permeability	0.50	Seepage	0.50
7582:					
Valent-------------	90	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
				Slope	0.91
7586:					
Valent	95	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
7588:					
Valent, rolling	50	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
Valent, hilly	45	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
9985:					
Pits	100	Not rated		Not rated	
9998:					
Water	100	Not rated		Not rated	

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1130:							
Alliance	90	Very limited		Not limited		Somewhat limited	
		Depth to bedrock	1.00			Depth to bedrock	0.13
1146:							
Alliance	65	Very limited		Not limited		Somewhat limited	
		Depth to bedrock	1.00			Depth to bedrock	0.42
Rosebud	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
1198:							
Altvan	45	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
Eckley	30	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
Satanta, sandy substratum	20	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
1295:							
Ashollow	65	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
Tassel	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Slope	1.00	Depth to bedrock	1.00
		Slope	1.00			Slope	1.00
						Seepage	0.50
1588:							
Blueridge	50	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Slope	1.00	Too Sandy	1.00
		Slope	1.00			Seepage	1.00
						Slope	1.00
						Gravel content	0.01
Altvan	35	Very limited		Somewhat limited		Very limited	
		Too Sandy	1.00	Slope	0.00	Too Sandy	1.00
		Slope	0.00			Seepage	1.00
						Slope	0.00
1782:							
Broadwater, frequently flooded	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
1944:							
Calamus, very rarely flooded	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00	Flooding	0.20		
		Flooding	0.20				
2072:							
Chappell	38	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
Alice	33	Not limited		Not limited		Somewhat limited	
						Seepage	0.50
Broadwater	24	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
2630:							
Duroc	90	Not limited		Not limited		Not limited	
2638:							
Duroc	90	Not limited		Not limited		Not limited	
2639:							
Duroc	90	Not limited		Not limited		Not limited	
3050:							
Glenberg, rarely flooded	90	Very limited		Somewhat limited		Somewhat limited	
		Too Sandy	1.00	Flooding	0.40	Seepage	0.50
		Flooding	0.40			Too Sandy	0.50
3140:							
Gothenburg, occasionally flooded	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	1.00
		Too Sandy	1.00				
3952:							
Jankosh	85	Very limited		Very limited		Very limited	

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
		Too Sandy	1.00	Flooding	0.40	Sodium content	1.00
		Sodium content	1.00			Depth to saturated zone	0.68
		Flooding	0.40				
4028:							
Jayem----------	90	Not limited		Not limited		Somewhat limited	
						Seepage	0.50
4070:							
Johnstown----------	35	Very limited		Not limited		Somewhat limited	
		Seepage	1.00			Too clayey	0.50
		Too clayey	0.50				
Satanta, sandy substratum---------	31	Not limited		Not limited		Not limited	
Richfield----------	29	Not limited		Not limited		Somewhat limited	
						Seepage	0.50
4151:							
Keith----------	90	Not limited		Not limited		Not limited	
4152:							
Keith----------	90	Not limited		Not limited		Not limited	
4310:							
Kuma----------	95	Not limited		Not limited		Not limited	
4311:							
Kuma----------	90	Not limited		Not limited		Not limited	
4472:							
Las Animas, frequently flooded-	95	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Seepage	1.00	Too Sandy	0.50
		Too Sandy	1.00				
4475:							
Las Animas, occasionally flooded----------	92	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.68
		Seepage	1.00	Seepage	1.00	Too Sandy	0.50
		Too Sandy	1.00				
4592:							
Lexsworth, very rarely flooded-----	85	Very limited		Somewhat limited		Very limited	
		Too Sandy	1.00	Flooding	0.20	Too Sandy	1.00
		Flooding	0.20			Seepage	1.00
4655:							
Lodgepole, ponded---	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
5212:							
Merrick, very rarely flooded----------	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	0.50
		Too clayey	0.50	Flooding	0.20		
		Flooding	0.20				
6132:							
Platte, occasionally flooded----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Too Sandy	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.86
		Too Sandy	1.00				
6248:							
Ralton, very rarely flooded----------	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.50
		Seepage	1.00	Flooding	0.20		
		Flooding	0.20				
6625:							
Sarben----------	90	Not limited		Not limited		Somewhat limited	
						Seepage	0.50
6626:							
Sarben----------	90	Not limited		Not limited		Somewhat limited	

SANITARY FACILITIES--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Seepage	0.50
6722:							
Satanta	65	Not limited		Not limited		Not limited	
Altvan	25	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
6725:							
Ascalon	45	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
Satanta, sandy substratum	45	Not limited		Not limited		Very limited	
						Seepage	1.00
6727:							
Satanta, sandy substratum	60	Not limited		Not limited		Very limited	
						Seepage	1.00
Johnstown	18	Very limited		Not limited		Very limited	
		Seepage	1.00			Seepage	1.00
Altvan	15	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
6817:							
Scoville	95	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
6930:							
Sidney	85	Very limited		Not limited		Somewhat limited	
		Depth to bedrock	1.00			Depth to bedrock	0.42
6937:							
Sidney	65	Very limited		Not limited		Somewhat limited	
		Depth to bedrock	1.00			Depth to bedrock	0.42
Canyon	25	Very limited		Not limited		Very limited	
		Depth to bedrock	1.00			Depth to bedrock	1.00
7120:							
Sulco, moderately eroded	55	Not limited		Not limited		Not limited	
Mcconaughy, moderately eroded	30	Not limited		Not limited		Not limited	
7121:							
Sulco, moderately eroded	65	Not limited		Not limited		Not limited	
Mcconaughy, moderately eroded	25	Not limited		Not limited		Not limited	
7122:							
Sulco, moderately eroded	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Mcconaughy, moderately eroded	20	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
7582:							
Valent	90	Very limited		Not limited		Very limited	
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
7586:							
Valent	95	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Slope	1.00	Too Sandy	1.00
		Slope	1.00			Seepage	1.00
						Slope	1.00
7588:							
Valent, rolling	50	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Slope	1.00	Too Sandy	1.00
		Slope	1.00			Seepage	1.00
						Slope	1.00
Valent, hilly	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too Sandy	1.00			Too Sandy	1.00
						Seepage	1.00
9985:							
Pits	100	Not rated		Not rated		Not rated	
9998:							
Water	100	Not rated		Not rated		Not rated	

AGRICULTURAL WASTE MANAGEMENT
Deuel County, Nebraska

The nature of the soil is also important in the application of organic wastes and wastewater to land as fertilizers and irrigation; it is also important when the soil is used as a medium for treatment and disposal of these wastes. Favorable soil properties are required to prevent environmental damage.

The use of organic wastes and wastewater as production resources will result in energy conservation, prevent the waste of these important resources, and prevent problems associated with their disposal. Where disposal is the goal, and a maximum amount is disposed in a minimum area to hold costs to a minimum, risk of environmental damage is the principal constraint. Where the reuse goal is pursued, and a minimum amount is applied to a maximum area to obtain the greatest benefit, environmental damage is unlikely.

Interpretations developed for waste management may include ratings for (1) manure and food processing wastes; (2) municipal sewage sludge; (3) irrigation use of wastewater; or (4) treatment of wastewater by the slow rate process, overland flow process, or rapid infiltration process. If available, these should be located in this subsection.

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The Ag-Waste tables show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, phosphorus, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation)and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are generally favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density.The wind erodibility group, the soil erodibility factor K, and slope are consideredin estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

AGRICULTURAL WASTE MANAGEMENT
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The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding.

The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

See the National Soil Handbook, September 1992, Part 620, for criteria used in rating soils for sanitary facilities and waste management.

AGRICULTURAL WASTE MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1130:							
Alliance	90	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
1146:							
Alliance	65	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
Rosebud	25	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to bedrock	0.42	Depth to bedrock	0.42	Depth to bedrock	0.42
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
		Droughty	0.08	Droughty	0.08	Droughty	0.08
1198:							
Altvan	45	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	0.66
						Restricted permeability	0.22
						Too steep for sprinkler application	0.00
Eckley	30	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.89	Droughty	0.89	Droughty	0.89
		Restricted permeability	0.41	Restricted permeability	0.31	Too steep for surface application	0.66
						Restricted permeability	0.31
						Too steep for sprinkler application	0.00
Satanta, sandy substratum	20	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Too steep for surface application	0.66
						Restricted permeability	0.31
						Too steep for sprinkler application	0.00
1295:							
Ashollow	65	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Too steep for surface application	1.00
						Too steep for sprinkler application	0.89
Tassel	30	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Droughty	1.00	Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Runoff limitation	0.40	Filtering capacity	0.00	Too steep for sprinkler application	1.00
		Filtering capacity	0.00			Filtering capacity	0.00
1588:							
Blueridge	50	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Low adsorption	1.00	Droughty	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00	Droughty	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	1.00			Too steep for surface application	1.00
		Leaching limitation	0.45			Too steep for sprinkler application	1.00
Altvan	35	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Too steep for surface application	1.00
		Slope	0.00	Slope	0.00	Restricted permeability	0.22
						Too steep for sprinkler application	0.10
1782:							
Broadwater, frequently flooded-	90	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Droughty	1.00	Droughty	1.00	Droughty	1.00
		Low adsorption	0.93			Low adsorption	0.93
		Leaching limitation	0.45				
1944:							
Calamus, very rarely flooded	95	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.97	Droughty	0.97	Droughty	0.97
		Leaching limitation	0.45	Flooding	0.20		
2072:							
Chappell	38	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.08	Droughty	0.08
		Droughty	0.08				
Alice	33	Somewhat limited		Somewhat limited		Somewhat limited	
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
Broadwater	24	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	1.00	Flooding	1.00	Droughty	1.00
		Low adsorption	0.93	Droughty	1.00	Low adsorption	0.93
		Flooding	0.60			Flooding	0.60
		Leaching limitation	0.45				
2630:							
Duroc	90	Not limited		Not limited		Not limited	
2638:							
Duroc	90	Not limited		Not limited		Not limited	
2639:							
Duroc	90	Not limited		Not limited		Not limited	
3050:							
Glenberg, rarely flooded	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Filtering capacity	0.00	Flooding	0.40	Filtering capacity	0.00
				Filtering capacity	0.00		
3140:							
Gothenburg, occasionally flooded	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low adsorption	1.00	Flooding	1.00	Low adsorption	1.00
		Droughty	1.00	Droughty	1.00	Droughty	1.00
		Flooding	0.60	Low adsorption	0.08	Flooding	0.60

AGRICULTURAL WASTE MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3952:							
Jankosh	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Depth to saturated zone	0.95	Salinity	1.00	Salinity	1.00
		Salinity	0.50	Depth to saturated zone	0.95	Depth to saturated zone	0.95
		Restricted permeability	0.30	Flooding	0.40	Restricted permeability	0.22
4028:							
Jayem	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
4070:							
Johnstown	35	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
Satanta, sandy substratum	31	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
Richfield	29	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
4151:							
Keith	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
4152:							
Keith	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
						Too steep for surface application	0.17
4310:							
Kuma	95	Not limited		Not limited		Not limited	
4311:							
Kuma	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
4472:							
Las Animas, frequently flooded	95	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Runoff limitation	0.40				
4475:							
Las Animas, occasionally flooded	92	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.95	Flooding	1.00	Depth to saturated zone	0.95
		Flooding	0.60	Depth to saturated zone	0.95	Flooding	0.60
		Runoff limitation	0.40				
4592:							
Lexsworth, very rarely flooded	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
		Sodium content	0.02	Flooding	0.20	Sodium content	0.02
		Salinity	0.01	Sodium content	0.02		

AGRICULTURAL WASTE MANAGEMENT--Continued
Deuel County, Nebraska

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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4655:							
Lodgepole, ponded---	95	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40				
5212:							
Merrick, very rarely flooded----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
				Flooding	0.20		
6132:							
Platte, occasionally flooded----------	90	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to saturated zone	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Droughty	0.61	Depth to saturated zone	1.00	Droughty	0.61
		Flooding	0.60	Droughty	0.61	Flooding	0.60
6248:							
Ralton, very rarely flooded----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Filtering capacity	0.00	Flooding	0.20	Filtering capacity	0.00
				Filtering capacity	0.00		
6625:							
Sarben---------------	90	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.01	Droughty	0.01	Droughty	0.01
6626:							
Sarben---------------	90	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	0.01	Droughty	0.01	Too steep for surface application	0.17
						Droughty	0.01
6722:							
Satanta-------------	65	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
						Too steep for surface application	0.17
Altvan---------------	25	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
						Too steep for surface application	0.17
6725:							
Ascalon-------------	45	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
Satanta, sandy substratum---------	45	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
6727:							
Satanta, sandy substratum---------	60	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
Johnstown----------	18	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.41	Restricted permeability	0.31	Restricted permeability	0.31
Altvan----------	15	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.30	Restricted permeability	0.22	Restricted permeability	0.22
6817:							
Scoville----------	95	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Depth to dense layer	1.00	Droughty	0.22	Droughty	0.22
		Leaching limitation	0.45				
		Droughty	0.22				
6930:							
Sidney----------	85	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.17
6937:							
Sidney----------	65	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.97
						Too steep for sprinkler application	0.05
Canyon----------	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Droughty	1.00	Droughty	1.00
		Droughty	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Runoff limitation	0.40			Too steep for surface application	0.97
		Low adsorption	0.14			Low adsorption	0.14
						Too steep for sprinkler application	0.05
7120:							
Sulco, moderately eroded----------	55	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.31
Mcconaughy, moderately eroded--	30	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.08
7121:							
Sulco, moderately eroded----------	65	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.97
						Too steep for sprinkler application	0.05
Mcconaughy, moderately eroded--	25	Not limited		Not limited		Somewhat limited	
						Too steep for surface application	0.97
						Too steep for sprinkler application	0.05
7122:							
Sulco, moderately eroded----------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Deuel County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
						Too steep for sprinkler application	1.00
Mcconaughy, moderately eroded--	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Too steep for surface application	1.00
						Too steep for sprinkler application	0.77
7582:							
Valent----------	90	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Low adsorption	1.00	Droughty	0.88	Low adsorption	1.00
		Depth to dense layer	1.00	Low adsorption	0.50	Droughty	0.88
		Droughty	0.88			Too steep for surface application	0.66
		Leaching limitation	0.45			Too steep for sprinkler application	0.00
7586:							
Valent----------	95	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Low adsorption	1.00	Slope	1.00	Low adsorption	1.00
		Slope	1.00	Droughty	0.88	Too steep for surface application	1.00
		Depth to dense layer	1.00	Low adsorption	0.50	Too steep for sprinkler application	1.00
		Droughty	0.88			Droughty	0.88
7588:							
Valent, rolling-----	50	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Low adsorption	1.00	Slope	1.00	Low adsorption	1.00
		Slope	1.00	Droughty	0.88	Too steep for surface application	1.00
		Depth to dense layer	1.00	Low adsorption	0.50	Too steep for sprinkler application	1.00
		Droughty	0.88			Droughty	0.88
Valent, hilly-------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Filtering capacity	1.00	Slope	1.00	Low adsorption	1.00
		Low adsorption	1.00	Droughty	0.88	Too steep for surface application	1.00
		Depth to dense layer	1.00	Low adsorption	0.50	Too steep for sprinkler application	1.00
		Droughty	0.88			Droughty	0.88
9985:							
Pits----------	100	Not rated		Not rated		Not rated	
9998:							
Water----------	100	Not rated		Not rated		Not rated	

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Deuel County, Nebraska

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (USDA, 1999) and "Keys to Soil Taxonomy"' (USDA, 1998) and in the "Soil Survey Manual" (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units in the Hydric Soil Interpretations table meet the definition of hydric soils and, in addition, have at east one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

These map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Deuel County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
1130:							
ALLIANCE LOAM, 0 TO 1 PERCENT SLOPES	ALLIANCE	No	plain	---	---	---	---
	ROSEBUD	No	plain	---	---	---	---
1146:							
ALLIANCE-ROSEBUD LOAMS, 1 TO 3 PERCENT SLOPES	ALLIANCE	No	plain	---	---	---	---
	ROSEBUD	No	plain	---	---	---	---
	CANYON	No	plain	---	---	---	---
1198:							
ALTVAN-ECKLEY-SATANTA COMPLEX, 3 TO 9 PERCENT SLOPES	ALTVAN	Unranked	hillslope	---	---	---	---
	ECKLEY	Unranked	hillslope	---	---	---	---
	SATANTA	No	hillslope	---	---	---	---
	BROADWATER	No	flood plain	---	---	---	---
	SARBEN	No	hillslope	---	---	---	---
1295:							
ASHOLLOW-TASSEL COMPLEX, 9 TO 30 PERCENT SLOPES	ASHOLLOW	No	hillslope	---	---	---	---
	TASSEL	No	hillslope	---	---	---	---
	ROCK OUTCROP	Unranked	hillslope	---	---	---	---
1588:							
BLUERIDGE-ALTVAN COMPLEX, 6 TO 30 PERCENT SLOPES	BLUERIDGE	No	hillslope	---	---	---	---
	ALTVAN	Unranked	hillslope	---	---	---	---
	SARBEN	No	hillslope	---	---	---	---
	BROADWATER	No	flood plain	---	---	---	---
1782:							
BROADWATER LOAMY SAND, 0 TO 1 PERCENT SLOPES, FREQUENTLY FLOODED	BROADWATER	No	flood plain	---	---	---	---
	CHAPPELL	No	stream terrace	---	---	---	---
	GLENBERG	No	flood plain	---	---	---	---
1944:							
CALAMUS SAND, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	CALAMUS	No	flood plain	---	---	---	---
	PLATTE	No	flood plain	---	---	---	---
2072:							
CHAPPELL-ALICE-BROADWATER COMPLEX, 0 TO 3 PERCENT SLOPES	CHAPPELL	No	stream terrace	---	---	---	---
	ALICE	No	stream terrace	---	---	---	---
	BROADWATER	No	flood plain	---	---	---	---
	DUROC	No	stream terrace	---	---	---	---
2630:							
DUROC LOAM, 0 TO 1 PERCENT SLOPES	DUROC	No	swale	---	---	---	---
	KUMA	No	plain	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
2638:							
DUROC LOAM, TERRACE, 0 TO 1 PERCENT SLOPES	DUROC	No	stream terrace	---	---	---	---
	ALICE	No	stream terrace	---	---	---	---
	CHAPPELL	No	stream terrace	---	---	---	---
2639:							
DUROC LOAM, TERRACE, 1 TO 3 PERCENT SLOPES	DUROC	No	stream terrace	---	---	---	---
	ALICE	No	stream terrace	---	---	---	---
	CHAPPELL	No	stream terrace	---	---	---	---
3050:							
GLENBERG FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	GLENBERG	No	flood plain	---	---	---	---
	BROADWATER	No	flood plain	---	---	---	---
	CHAPPELL	No	stream terrace	---	---	---	---
3140:							
GOTHENBURG SOILS, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	GOTHENBURG	Yes	flood plain	2B2	YES	NO	NO
	PLATTE	No	flood plain	---	---	---	---
3952:							
JANKOSH LOAM, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	JANKOSH	No	flood plain	---	---	---	---
	PLATTE	No	flood plain	---	---	---	---
	LEXSWORTH	No	flood plain	---	---	---	---

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Deuel County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
4028: JAYEM FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	JAYEM	No	plain	---	---	---	---
	SARBEN	No	plain	---	---	---	---
	SATANTA	No	plain	---	---	---	---
4070: JOHNSTOWN-SATANTA-RICHFIELD LOAMS, 0 TO 1 PERCENT SLOPES	JOHNSTOWN	No	plain	---	---	---	---
	SATANTA	No	plain	---	---	---	---
	RICHFIELD	No	plain	---	---	---	---
	ALTVAN	Unranked	plain	---	---	---	---
4151: KEITH LOAM, 1 TO 3 PERCENT SLOPES	KEITH	No	plain	---	---	---	---
	ALLIANCE	No	plain	---	---	---	---
	DUROC	No	swale	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
4152: KEITH LOAM, 3 TO 6 PERCENT SLOPES	KEITH	No	plain	---	---	---	---
	ALLIANCE	No	hillslope	---	---	---	---
	SIDNEY	No	hillslope	---	---	---	---
4310: KUMA LOAM, 0 TO 1 PERCENT SLOPES	KUMA	No	plain	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
4311: KUMA LOAM, 1 TO 3 PERCENT SLOPES	KUMA	No	plain	---	---	---	---
	SATANTA	No	plain	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
4472: LAS ANIMAS LOAM, 0 TO 1 PERCENT SLOPES, CHANNELED, FREQUENTLY FLOODED	LAS ANIMAS	Yes	flood plain	2B3	YES	NO	NO
	RALTON	No	stream terrace	---	---	---	---
4475: LAS ANIMAS LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	LAS ANIMAS	Yes	flood plain	2B3	YES	NO	NO
	RALTON	No	stream terrace	---	---	---	---
	GLENBERG	No	flood plain	---	---	---	---
4592: LEXSWORTH LOAM, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	LEXSWORTH	No	flood plain	---	---	---	---
	MERRICK	No	flood plain	---	---	---	---
	PLATTE	No	flood plain	---	---	---	---
4655: LODGEPOLE SILT LOAM, PONDED	LODGEPOLE	Yes	playa	2A	YES	NO	NO
	DUROC	No	swale	---	---	---	---
5212: MERRICK SANDY CLAY LOAM, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	MERRICK	No	flood plain	---	---	---	---
	DUROC	No	stream terrace	---	---	---	---
	LEXSWORTH	No	flood plain	---	---	---	---
6132: PLATTE LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	PLATTE	No	flood plain	---	---	---	---
	GOTHENBURG	Yes	flood plain	2B2	YES	NO	NO
6248: RALTON LOAM, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	RALTON	No	stream terrace	---	---	---	---
	ALICE	No	stream terrace	---	---	---	---
	CHAPPELL	No	stream terrace	---	---	---	---
6625: SARBEN LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	SARBEN	No	plain	---	---	---	---
	JAYEM	No	plain	---	---	---	---
	VALENT	No	plain	---	---	---	---
6626: SARBEN LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	SARBEN	No	hillslope	---	---	---	---
	JAYEM	No	hillslope	---	---	---	---
	VALENT	No	hillslope	---	---	---	---

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Deuel County, Nebraska

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
6722: SATANTA-ALTVAN COMPLEX, 3 TO 6 PERCENT SLOPES	SATANTA	No	hillslope	---	---	---	---
	ALTVAN	No	hillslope	---	---	---	---
	JAYEM	No	hillslope	---	---	---	---
	JOHNSTOWN	No	plain	---	---	---	---
6725: SATANTA-ASCALON COMPLEX, 0 TO 2 PERCENT SLOPES	ASCALON	No	plain	---	---	---	---
	SATANTA	No	plain	---	---	---	---
	JAYEM	No	plain	---	---	---	---
6727: SATANTA-JOHNSTOWN-ALTVAN LOAMS, 1 TO 3 PERCENT SLOPES	SATANTA	No	plain	---	---	---	---
	JOHNSTOWN	No	plain	---	---	---	---
	ALTVAN	No	plain	---	---	---	---
	KUMA	No	plain	---	---	---	---
	LODGEPOLE	Yes	playa	2A	YES	NO	NO
6817: SCOVILLE LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	SCOVILLE	No	stream terrace	---	---	---	---
	CHAPPELL	No	stream terrace	---	---	---	---
6930: SIDNEY LOAM, 3 TO 6 PERCENT SLOPES	SIDNEY	No	hillslope	---	---	---	---
	CANYON	No	hillslope	---	---	---	---
	ALLIANCE	No	plain	---	---	---	---
6937: SIDNEY-CANYON LOAMS, 3 TO 9 PERCENT SLOPES	SIDNEY	No	hillslope	---	---	---	---
	CANYON	No	hillslope	---	---	---	---
	ROSEBUD	No	hillslope	---	---	---	---
7120: SULCO-MCCONAUGHY LOAMS, 3 TO 6 PERCENT SLOPES, MODERATELY ERODED	SULCO	No	hillslope	---	---	---	---
	MCCONAUGHY	No	hillslope	---	---	---	---
	KEITH	No	hillslope	---	---	---	---
	DUROC	No	swale	---	---	---	---
7121: SULCO-MCCONAUGHY LOAMS, 6 TO 9 PERCENT SLOPES, MODERATELY ERODED	SULCO	No	hillslope	---	---	---	---
	MCCONAUGHY	No	hillslope	---	---	---	---
	KEITH	No	hillslope	---	---	---	---
	SARBEN	No	hillslope	---	---	---	---
7122: SULCO-MCCONAUGHY LOAMS, 9 TO 20 PERCENT SLOPES, MODERATELY ERODED	SULCO	No	hillslope	---	---	---	---
	MCCONAUGHY	No	hillslope	---	---	---	---
	KEITH	No	hillslope	---	---	---	---
	SARBEN	No	hillslope	---	---	---	---
7582: VALENT FINE SAND, 3 TO 9 PERCENT SLOPES	VALENT	No	dune	---	---	---	---
	SARBEN	No	dune	---	---	---	---
7586: VALENT FINE SAND, ROLLING	VALENT	No	dune	---	---	---	---
	SARBEN	No	dune	---	---	---	---
7588: VALENT COMPLEX, ROLLING AND HILLY	VALENT	No	dune	---	---	---	---
	VALENT	No	dune	---	---	---	---
	SARBEN	No	dune	---	---	---	---
9975: SANITARY LANDFILL	SANITARY LANDFILL	---	---	---	---	---	---
9985: PITS, SAND AND GRAVEL	PITS	Unranked	---	---	---	---	---
9998: WATER	WATER	Unranked	---	---	---	---	---

HYDRIC SOIL INTERPRETATIONS
HYDRIC SOILS LIST
Deuel County, Nebraska

All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria

FOOTNOTE: There may be small areas of included soils or miscellaneous areas that are significant to use and management of the soil; yet are too small to delineate on the soil map at the map's original scale. These may be designated as spot symbols and are defined in the published Soil Survey Report or the USDA-NRCS Technical Guide, Part II.
Areas mapped as water or any map unit that contains one of the following conventional symbols is considered a hydric soil map unit: marshes or swamps; wet spots; depressions; streams, lakes and ponds.

1. All Histosols except Folists, or

2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:

   a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or

   b. poorly drained or very poorly drained and have either:

      (1) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in),

      or for other soils

      (2) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or

      (3) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or

3. Soils that are frequently ponded for long duration or very long duration during the growing season, or

4. Soils that are frequently flooded for long duration or very long duration during the growing season.

HIGHLY ERODIBLE LANDS REPORT
Deuel County, Nebraska

Map Symbol	Soil Mapunit Name	HEL Classification R=75 C=60		
		Wind	Water	MU
1130	ALLIANCE LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
1146	ALLIANCE-ROSEBUD LOAMS, 1 TO 3 PERCENT SLOPES	3	3	3
1198	ALTVAN-ECKLEY-SATANTA COMPLEX, 3 TO 9 PERCENT SLOPES	1	2	1
1295	ASHOLLOW-TASSEL COMPLEX, 9 TO 30 PERCENT SLOPES	1	1	1
1588	BLUERIDGE-ALTVAN COMPLEX, 6 TO 30 PERCENT SLOPES	1	2	1
1782	BROADWATER LOAMY SAND, 0 TO 1 PERCENT SLOPES, FREQUENTLY FLOODED	1	3	1
1944	CALAMUS SAND, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	1	3	1
2072	CHAPPELL-ALICE-BROADWATER COMPLEX, 0 TO 3 PERCENT SLOPES	1	3	1
2630	DUROC LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
2638	DUROC LOAM, TERRACE, 0 TO 1 PERCENT SLOPES	3	3	3
2639	DUROC LOAM, TERRACE, 1 TO 3 PERCENT SLOPES	3	3	3
3050	GLENBERG FINE SANDY LOAM, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	1	3	1
3140	GOTHENBURG SOILS, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	1	3	1
3952	JANKOSH LOAM, 0 TO 1 PERCENT SLOPES, RARELY FLOODED	1	3	1
4028	JAYEM FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
4070	JOHNSTOWN-SATANTA-RICHFIELD LOAMS, 0 TO 1 PERCENT SLOPES	3	3	3
4151	KEITH LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
4152	KEITH LOAM, 3 TO 6 PERCENT SLOPES	3	3	3
4310	KUMA LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
4311	KUMA LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
4472	LAS ANIMAS LOAM, 0 TO 1 PERCENT SLOPES, CHANNELED, FREQUENTLY FLOODED	3	3	3
4475	LAS ANIMAS LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	3	3	3
4592	LEXSWORTH LOAM, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	3	3	3
4655	LODGEPOLE SILT LOAM, PONDED	1	3	1
5212	MERRICK SANDY CLAY LOAM, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	3	3	3
6132	PLATTE LOAM, 0 TO 1 PERCENT SLOPES, OCCASIONALLY FLOODED	1	3	1
6248	RALTON LOAM, 0 TO 1 PERCENT SLOPES, VERY RARELY FLOODED	1	3	1
6625	SARBEN LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
6626	SARBEN LOAMY FINE SAND, 3 TO 6 PERCENT SLOPES	1	3	1
6722	SATANTA-ALTVAN COMPLEX, 3 TO 6 PERCENT SLOPES	3	2	2
6725	SATANTA-ASCALON COMPLEX, 0 TO 2 PERCENT SLOPES	1	3	1
6727	SATANTA-JOHNSTOWN-ALTVAN LOAMS, 1 TO 3 PERCENT SLOPES	3	3	3
6817	SCOVILLE LOAMY FINE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
6930	SIDNEY LOAM, 3 TO 6 PERCENT SLOPES	3	3	3
6937	SIDNEY-CANYON LOAMS, 3 TO 9 PERCENT SLOPES	1	2	1
7120	SULCO-MCCONAUGHY LOAMS, 3 TO 6 PERCENT SLOPES, MODERATELY ERODED	2	3	1
7121	SULCO-MCCONAUGHY LOAMS, 6 TO 9 PERCENT SLOPES, MODERATELY ERODED	2	3	1
7122	SULCO-MCCONAUGHY LOAMS, 9 TO 20 PERCENT SLOPES, MODERATELY ERODED	2	2	2
7582	VALENT FINE SAND, 3 TO 9 PERCENT SLOPES	1	3	1
7586	VALENT FINE SAND, ROLLING	1	3	1
7588	VALENT COMPLEX, ROLLING AND HILLY	1	1	1
9975	SANITARY LANDFILL			
9985	PITS, SAND AND GRAVEL	1	2	1
9998	WATER			